

DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2018
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES
MAY 2017

Navy Working Capital Fund (NWCF)

The estimated cost for this report for the Department of Navy (DON) is \$68,806.

The estimated total cost for supporting the DON budget justification material is approximately \$1,142,960 for the 2017 fiscal year. This includes \$76,659 in supplies and \$1,066,301 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 providing products and services on a reimbursable basis, based on a customer-provider relationship between operating units and NWCF support organizations. Unlike for-profit commercial businesses, NWCF activities break even over the budget cycle. The NWCF provides stabilized pricing to customers to prevent fluctuations in market prices from being passed on to customers as in-year protibations. Fluctuations are recovered from customers in future years via rate changes. The NWCF is key to supporting the DON's presence and posture through capability, capacity, and readiness.

As a primary consideration of this budget, the DON has carefully assessed cash balances, impacts of potential changes to customer rates, and customer support effectiveness. Current net outlay projections reflect changes in workload, updated operating estimates, and keeps the DON's cash balance in the defined operational range for FY 2018.

The DON has also stressed depot workload carryover compliance as well as orders for Navy Research and Development deliverables in this budget. Carryover occurs when work has been ordered and funded (obligated) by customers, but has not been completed at the end of a fiscal year. Some carryover is appropriate in order for NWCF activities to ensure the continuity of operations, but as a goal should fall within the Department of Defense (DoD) Financial Management Regulation (FMR) prescribed allowable carryover. The FY 2018 budget achieves this goal through the right mix of new orders and outlay rates of the customers' appropriations financing the work.

The NWCF activity groups comprise five primary areas: Supply Management, Depot Maintenance, Transportation, Research and Development, and Base Support. The wide range of goods and services provided by NWCF activities are crucial to the DON's afloat and ashore readiness and maintaining a relevant industrial base. The value of goods and services provided by NWCF activities in FY 2018 is projected to be approximately \$31 billion, as shown in Figure 1. The FY 2018 budget request reflects an increase of \$355 million, or 1.2%, from FY 2017. The cost increase is primarily attributable to general price inflation, fuel changes, and further investment in laboratories and warfare centers in accordance with Section 212 of the FY 2017 National Defense Authorization Act.

Figure 1 - Summary of NWCF Costs

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>Operating Costs</u>			
Supply - Obligations	7,400.3	8,943.8	8,645.3
Depot Maintenance - Aircraft	2,147.6	2,186.7	2,280.6
Depot Maintenance - Marine Corps	469.5	396.3	312.1
Transportation	2,927.4	2,693.3	2,831.8
Research and Development	12,902.6	13,264.3	13,627.8
Base Support	3,075.4	3,118.7	3,260.8
Total	28,922.9	30,603.2	30,958.3

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 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.



issues.

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

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



maritime crossroads.

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

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; 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 capability. To continue and accelerate innovation, the Navy is increasing investment in laboratories and warfare centers in accordance with Section 212 of the 2017 National Defense Authorization Act.



The R&D activities also provide 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 in the logistics area is vital to ensuring the necessary mission capabilities of the operating forces sustaining our global presence.

- Space and Naval Warfare System Centers provide fleet support for command, control, and communication systems, ocean surveillance, the integration of systems that connect different platforms, and cyber warfighting capability from seabed to space.

- Naval Air Warfare Center provides support for carrier and land-based aircraft, engines, avionics, aircraft support systems and ship/shore/air operations.
- Naval Surface Warfare Center provides fleet support for hull, mechanical, and electrical systems, surface combat systems, coastal warfare systems, and other offensive and defensive systems associated with surface warfare.
- Naval Undersea Warfare Center provides fleet support for submarines, autonomous underwater systems, and offensive and defensive systems associated with undersea warfare.
- Naval Research Laboratory operates as the DON'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

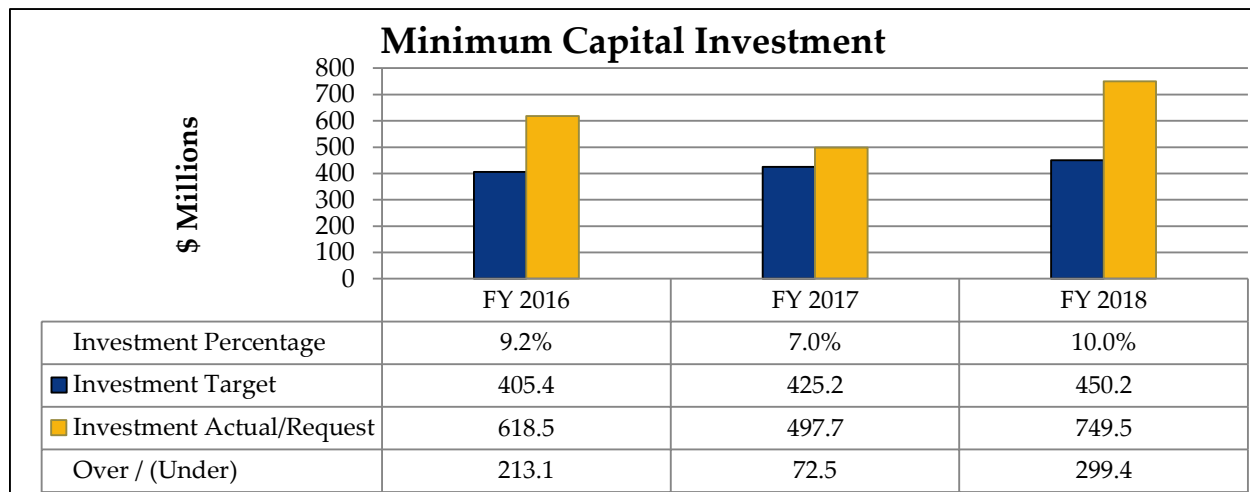


The Base Support business area is comprised of the Facilities Engineering Commands (FECs) and the NWCF portion of Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC). The FECs provide a broad range of services by ensuring that DON and DoD facilities and installations have reliable 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. Lastly, the FY 2018 request reflects a realignment of rail operations at Naval Support Activity, Crane from NAVFAC Mid-Atlantic to Army Ammunition Activity, Crane.

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 2018 request reflects the DON's continued commitment to sustain and recapitalize Depot Maintenance infrastructure and to maintain a relevant industrial base. The FY 2018 request exceeds the 6% threshold by nearly \$300 million as shipyards 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**Financial Summary Tables:**

The tables below reflect the DON NWCF FY 2018 request and include New Orders, Revenue, Operating Costs, Net Operating Results, Accumulated Operating Results, Workload, Cash, Customer Rate Changes, Unit Costs, Staffing, and the Capital Investment Program (CIP).

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

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>New Orders</u>			
Supply - Navy	6,717.9	6,823.1	7,271.7
Supply - Marine Corps	108.7	91.8	110.2
Depot Maintenance - Aircraft	1,988.1	2,466.9	2,426.6
Depot Maintenance - Marine Corps	375.7	352.4	323.0
R&D - Air Warfare Center	4,441.1	4,496.8	4,601.9
R&D - Surface Warfare Center	4,139.3	4,237.8	4,256.7
R&D - Undersea Warfare Center	1,144.4	1,221.6	1,232.5
R&D - SPAWAR Systems Center	2,273.5	2,368.0	2,333.7
R&D - Naval Research Laboratory	881.9	845.9	884.1
Transportation - MSC	3,024.7	3,002.2	2,633.3
Base Support - FECs	3,115.3	2,996.6	2,984.2
Base Support - EXWC	82.5	73.4	77.8
Total	28,293.1	28,976.5	29,135.5

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.

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>Revenue</u>			
Supply - Navy	6,819.6	7,074.0	7,306.5
Supply - Marine Corps	108.3	100.7	101.5
Depot Maintenance - Aircraft	2,023.7	2,349.3	2,380.4
Depot Maintenance - Marine Corps	469.1	404.0	304.2
R&D - Air Warfare Center	4,562.4	4,628.2	4,712.8
R&D - Surface Warfare Center	4,116.3	4,237.8	4,256.6
R&D - Undersea Warfare Center	1,105.7	1,201.3	1,219.1
R&D - SPAWAR Systems Center	2,278.4	2,349.5	2,437.0
R&D - Naval Research Laboratory	866.8	882.4	916.2
Transportation - MSC	3,159.4	3,002.2	2,633.3
Base Support - FECs	3,118.0	2,963.1	2,973.4
Base Support - EXWC	78.0	76.3	80.1
Total	28,705.7	29,268.9	29,321.1

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

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>Operating Costs</u>			
Supply - Navy (Obligations)	7,328.4	8,842.5	8,544.7
Supply - Marine Corps (Obligations)	71.9	101.3	100.6
Depot Maintenance - Aircraft	2,147.6	2,186.7	2,280.6
Depot Maintenance - Marine Corps	469.5	396.3	312.1
R&D - Air Warfare Center	4,591.9	4,605.7	4,714.9
R&D - Surface Warfare Center	4,073.9	4,192.1	4,316.4
R&D - Undersea Warfare Center	1,096.1	1,198.9	1,229.9
R&D - SPAWAR Systems Center	2,274.5	2,360.9	2,439.4
R&D - Naval Research Laboratory	866.2	906.7	927.1
Transportation - MSC	2,927.4	2,693.3	2,831.8
Base Support - FECs	2,996.6	3,042.6	3,183.3
Base Support - EXWC	78.8	76.2	77.4
Total	28,922.9	30,603.2	30,958.3

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

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>Net Operating Results</u>			
Supply - Navy	(102.1)	73.6	56.2
Supply - Marine Corps	5.0	(0.9)	0.5
Depot Maintenance - Aircraft	(132.8)	153.2	99.8
Depot Maintenance - Marine Corps	5.0	7.7	(7.9)
R&D - Air Warfare Center	(35.4)	22.6	(2.1)
R&D - Surface Warfare Center	42.8	45.7	(59.8)
R&D - Undersea Warfare Center	5.9	2.4	(10.8)
R&D - SPAWAR Systems Center	3.9	(11.4)	(13.9)
R&D - Naval Research Laboratory	0.5	(24.3)	(10.9)
Transportation - MSC	232.0	308.9	(198.5)
Base Support - FECs	110.6	(79.4)	(209.9)
Base Support - EXWC	(0.8)	0.1	2.6
Total	134.7	498.1	(354.7)

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

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>Accumulated Operating Results</u>			
Supply - Navy	(129.8)	(56.2)	0.0
Supply - Marine Corps	0.5	(0.5)	0.0
Depot Maintenance - Aircraft	(253.0)	(99.8)	0.0
Depot Maintenance - Marine Corps	0.2	7.9	0.0
R&D - Air Warfare Center	(20.4)	2.1	0.0
R&D - Surface Warfare Center	14.2	59.9	0.0
R&D - Undersea Warfare Center	8.4	10.8	0.0
R&D - SPAWAR Systems Center	25.3	13.9	0.0
R&D - Naval Research Laboratory	35.3	10.9	0.0
Transportation - MSC	225.4	198.5	0.0
Base Support - FECs	297.0	209.9	0.0
Base Support - EXWC	(2.7)	(2.6)	0.0
Total	200.4	354.8	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.

<i>(Percent Change)</i>	FY 2017	FY 2018
<u>Workload</u>		
Supply - Navy	3.4%	3.7%
Supply - Marine Corps	-5.3%	0.8%
Depot Maintenance - Aircraft	3.9%	2.2%
Depot Maintenance - Marine Corps	-4.1%	-26.5%
R&D - Air Warfare Center	-0.6%	-0.1%
R&D - Surface Warfare Center	-3.4%	0.0%
R&D - Undersea Warfare Center	-1.7%	0.0%
R&D - SPAWAR Systems Center	1.2%	1.6%
R&D - Naval Research Laboratory	1.7%	0.0%
Transportation - MSC	2.7%	2.7%
Base Support - FECs	1.5%	4.6%
Base Support - EXWC	-6.3%	0.0%
Total	0.4%	0.7%

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 cash balance within the upper and lower operational range. The DON's operational range calculation is based on average daily expenditure rates and a projection of outlays to procure capital investments. The operational range also takes into consideration DON specific cash volatility to ensure adequate cash balance is maintained to meet projected outlays throughout the year. The DON's NWCF cash requirement includes a forecast of collections and disbursements and considers cyclical timing of outlays. 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. Since the DON has been operating at cash levels below the operational range for the past several years, the DON has had to make execution year cash adjustments in order to maintain solvency and to prevent potential Anti-Deficiency Act (ADA) violations. In addition, as the DON moves towards the goal of Government Wide Accountability, which includes visibility of an accurate daily cash balance, cash requirements must account for the greatest time between collection and disbursement cycles. As depicted in the following figure, the DON NWCF cash balance profile reflects the Department's commitment to long term solvency.

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018
<u>Treasury Cash</u>			
Beginning Cash Balance	879.6	1,419.8	1,958.9
Collections	28,321.0	29,172.6	29,265.2
Disbursements	27,802.6	28,660.9	29,504.3
Fuel Supplemental	0.0	0.0	0.0
Consumable Item Transfer	21.8	27.4	1.4
Congressional Transfer	0.0	0.0	0.0
Ending Cash Balance	1,419.8	1,958.9	1,721.2
Upper Operational Range¹	1,660.0	2,200.0	2,200.0
Lower Operational Range¹	720.8	1,255.5	1,284.6

¹ Operational Range calculation derived from new "4Rs" methodology implemented in FY 2017

Customer Rate Changes: Approved composite rate changes from FY 2015 to FY 2016 and from FY 2016 to FY 2017 are displayed below. Composite rate changes from FY 2017 to FY 2018, designed to achieve an Accumulated Operating Result of zero, are also displayed as follows:

<i>(Percent Change)</i>	FY 2016	FY 2017	FY 2018
<u>Customer Rate Change</u>			
Supply			
Navy - Aviation Consumables	4.9%	3.9%	-0.4%
Navy - Shipboard Consumables	5.5%	2.7%	-0.3%
Navy - Aviation Repairables	2.9%	5.6%	1.2%
Navy - Shipboard Repairables	5.5%	2.7%	-0.3%
MARCORPS Repairables	5.2%	-3.9%	-2.3%
Depot Maintenance - Aircraft	-5.7%	26.4%	-10.3%
Depot Maintenance - Marine Corps	2.3%	4.0%	-0.9%
R&D - Air Warfare Center	1.2%	3.2%	2.7%
R&D - Surface Warfare Center	1.5%	3.2%	1.4%
R&D - Undersea Warfare Center	1.2%	0.9%	3.8%
R&D - SPAWAR Systems Center	1.6%	1.0%	3.8%
R&D - Naval Research Laboratory	9.8%	0.5%	4.8%
Transportation - MSC			
Combat Logistics Force	-0.1%	-3.4%	-4.0%
Special Mission Ships	10.1%	-4.3%	-3.8%
Afloat Prepositioning Ships	2.3%	77.4%	-44.9%
Service Support Ships	54.3%	-28.0%	-18.5%
Expeditionary Fast Transport	N/A	-30.0%	-100.0%
Base Support - FECs			
East Coast Utilities	5.5%	-0.4%	-7.2%
East Coast - Other	-8.7%	5.1%	5.3%
West Coast Utilities	1.8%	-11.3%	3.4%
West Coast - Other	-8.1%	-6.3%	4.8%
Base Support - EXWC	11.2%	7.1%	-1.5%

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 2016	FY 2017	FY 2018
Unit Cost			
Supply - Navy (cost per unit of sales ¹):			
Wholesale	1.097	1.290	1.195
Retail	\$0.930	\$1.001	\$1.001
Supply - Marine Corps (cost per unit of sales ¹):			
Wholesale	\$0.677	\$1.006	\$0.992
Retail	\$0.431	\$1.001	\$1.001
Depot Maintenance - Aircraft (\$/Direct Labor Hour)	\$202.70	\$198.55	\$202.58
Depot Maintenance - Marine Corps (\$/Direct Labor Hour)	\$143.44	\$126.27	\$135.29
R&D - Air Warfare Center (\$/Direct Labor Hour ²)	\$102.49	\$106.18	\$114.00
R&D - Surface Warfare Center (\$/Direct Labor Hour ²)	\$102.82	\$105.63	\$108.09
R&D - Undersea Warfare Center (\$/Direct Labor Hour ²)	\$100.58	\$104.02	\$106.20
R&D - SPAWAR Systems Center (\$/Direct Labor Hour ²)	\$109.70	\$110.72	\$114.42
R&D - Naval Research Laboratory (\$/Direct Labor Hour ²)	\$148.64	\$157.81	\$161.74
Transportation - MSC			
Combat Logistics Force (\$/day)	\$124,917	\$120,231	\$124,402
Special Mission Ships (\$/day)	\$34,713	\$35,356	\$39,001
Afloat Prepositioning Ships (\$/day)	\$60,944	\$62,854	\$66,030
Service Support Ships (\$/day)	\$85,957	\$81,164	\$72,088
Expeditionary Fast Transport	\$52,518	\$62,485	N/A
Base Support - FECs Cost of Services	Various	Various	Various
Base Support - EXWC (\$/direct Labor Hour ²)	\$111.14	\$115.50	\$117.43

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.

<i>(Strength in Whole Numbers)</i>	FY 2016	FY 2017	FY 2018
<u>Civilian End Strength</u>			
Supply - Navy	7,010	6,944	7,104
Supply - Marine Corps	26	26	26
Depot Maintenance - Aircraft	10,004	9,964	9,995
Depot Maintenance - Marine Corps	1,437	1,470	1,458
R&D - Air Warfare Center	15,092	15,013	15,233
R&D - Surface Warfare Center	18,211	17,685	17,905
R&D - Undersea Warfare Center	5,290	5,173	5,188
R&D - SPAWAR Systems Center	8,308	8,568	8,663
R&D - Naval Research Laboratory	2,517	2,523	2,523
Transportation - MSC	7,022	6,755	6,676
Base Support - FECs	9,564	9,435	9,422
Base Support - EXWC	404	395	395
Total	84,885	83,951	84,588

<i>(Workyears in Whole Numbers)</i>	FY 2016	FY 2017	FY 2018
<u>Civilian Workyears</u>			
Supply - Navy	7,053	6,939	7,099
Supply - Marine Corps	23	26	26
Depot Maintenance - Aircraft	9,595	9,777	9,873
Depot Maintenance - Marine Corps	1,529	1,480	1,478
R&D - Air Warfare Center	14,600	14,731	14,968
R&D - Surface Warfare Center	17,327	17,135	17,355
R&D - Undersea Warfare Center	5,025	5,110	5,125
R&D - SPAWAR Systems Center	8,253	8,403	8,528
R&D - Naval Research Laboratory	2,444	2,478	2,478
Transportation - MSC	9,369	8,652	8,709
Base Support - FECs	9,370	9,318	9,305
Base Support - EXWC	395	388	388
Total	84,983	84,437	85,332

<i>(Strength in Whole Numbers)</i>	FY 2016	FY 2017	FY 2018
<u>Military End Strength</u>			
Supply - Navy	364	364	364
Supply - Marine Corps	0	0	0
Depot Maintenance - Aircraft	114	122	129
Depot Maintenance - Marine Corps	11	11	11
R&D - Air Warfare Center	209	195	191
R&D - Surface Warfare Center	204	188	190
R&D - Undersea Warfare Center	41	36	36
R&D - SPAWAR Systems Center	78	81	80
R&D - Naval Research Laboratory	56	58	58
Transportation - MSC	160	165	165
Base Support - FECs	78	78	78
Base Support - EXWC	3	3	3
Total	1,318	1,301	1,305
<i>(Workyears in Whole Numbers)</i>	FY 2016	FY 2017	FY 2018
<u>Military Workyears</u>			
Supply - Navy	364	364	364
Supply - Marine Corps	0	0	0
Depot Maintenance - Aircraft	78	122	129
Depot Maintenance - Marine Corps	0	11	11
R&D - Air Warfare Center	185	171	166
R&D - Surface Warfare Center	198	190	189
R&D - Undersea Warfare Center	29	32	32
R&D - SPAWAR Systems Center	81	81	80
R&D - Naval Research Laboratory	57	58	58
Transportation - MSC	162	165	165
Base Support - FECs	59	78	78
Base Support - EXWC	3	3	3
Total	1,216	1,275	1,275

Capital Investment Program (CIP): The Capital Investment Program (CIP) within the NWCF establish the capability for reinvestment in the infrastructure of business areas to improve product and service quality and timeliness, reduce costs, and foster state-of-the-art business operations. The CIP provides the framework for planning, coordinating, and controlling NWCF resources and expenditures to obtain capital assets. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, whether internally or externally developed; and minor construction. 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.

<i>(Dollars in Millions)</i>	FY 2016	FY 2017	FY 2018	Chg FY 17/18
<u>Capital Investment Program</u>				
Supply - Navy	4.9	8.0	6.2	(1.8)
Supply - Marine Corps	0.0	0.0	0.0	0.0
Depot Maintenance - Aircraft	48.4	50.6	37.7	(12.9)
Depot Maintenance - Marine Corps	3.6	5.2	5.7	0.6
R&D - Air Warfare Center	45.4	54.3	47.6	(6.7)
R&D - Surface Warfare Center	33.3	55.0	41.8	(13.2)
R&D - Undersea Warfare Center	11.9	19.2	14.7	(4.6)
R&D - SPAWAR Systems Center	8.3	15.7	19.0	3.3
R&D - Naval Research Laboratory	15.1	28.3	24.5	(3.8)
Transportation - MSC	7.6	13.0	9.9	(3.1)
Base Support - FECs	26.5	15.3	15.8	0.5
Base Support - EXWC	0.0	0.0	0.0	0.0
Total	205.2	264.5	222.8	(41.7)

1. Fleet Readiness Centers

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NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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

FRC, EAST

FRC, SOUTHEAST

FRC, SOUTHWEST

Location

Cherry Point, NC

Jacksonville, FL

San Diego, CA

Significant Changes Since the FY 2017 President's Budget: The budget estimate for FY 2018 reflects changes from the President's budget submission to account for decreased Net Operating Results (NOR) projections. This primarily resulted from increased costs related to additional direct and indirect workyears in support of increasing throughput. Additionally, Aircraft and Engine workload estimates have been updated in this submission to more accurately reflect the increased cost required to perform the depot maintenance events.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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Financial Profile:

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

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$1,988.1	\$2,466.9	\$2,426.6
Revenue	\$2,023.7	\$2,349.3	\$2,380.4
Expense	\$2,147.6	\$2,186.7	\$2,280.6
Operating Results	(\$124.0)	\$162.5	\$99.8
Capital Surcharge	(\$8.8)	(\$9.3)	\$0.0
Net Operating Results (NOR)	(\$132.8)	\$153.2	\$99.8
Prior Year AOR	(\$120.2)	(\$253.0)	(\$99.8)
Accumulated Operating Results (AOR)	<u>(\$253.0)</u>	<u>(\$99.8)</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Orders, Revenue and Expense:

In order to achieve the goal of zero AOR in FY 2018, estimates are updated from the FY 2017 President's budget to reflect all known pricing and workload assumptions. FY 2018 includes a planned NOR of \$99.8 million to recoup prior year losses. Revenue remains consistent, which reflects an effort to stabilize throughput.

Orders - New reimbursable orders reflect an increase in FY 2017 related to impact of the prior year \$99.8 million AOR recoupment and programmatic increases in NSF Components (primarily material), Product Support - Logistics and Engineering (FA-18, V-22, and H-1), and Modifications (FA-18). FY 2018 reflects the impact of the prior year AOR recoupment and programmatic changes in Airframes (FA-18 & V-22).

Revenue - Revenue for FY 2016, FY 2017, and FY 2018 is consistent with updated estimates of new Reimbursable Orders and unfinished prior year workload that affects the direct labor hours required.

Expense (Cost of Goods & Services Sold) - Cost of Goods and Services Sold for FY 2017 and FY 2018 includes expenses related to additional direct and indirect workyears in support of increasing throughput.

Net Operating Results - The FY 2016 NOR is lower primarily due to labor and material overages on fixed price aircraft, engine, and component depot events. FY 2017 and FY 2018 NOR is set to recoup prior year losses and are set to achieve zero AOR.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$2,022.2	\$2,332.5	\$2,357.9
Disbursements	\$2,162.7	\$2,179.3	\$2,260.4
Outlays	<u>\$140.4</u>	<u>(\$153.2)</u>	<u>(\$97.5)</u>

Some totals may not add due to rounding.

The End of Fiscal Year (EOFY) 2016 cash balance was -\$188.4 million. For FY 2017 , the cash balance will increase by \$153.2 to a total EOFY 2017 balance of -\$35.2 million. The negative cash balances in FY 2016 and FY 2017 are as a direct result of incurring operating losses. Reflecting the increased revenue in FY 2018 to achieve zero AOR and recoup prior year losses, the FY 2018 cash balance will increase by \$97.6 million to a total EOFY cash balance of \$62.4 million

Workload:

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	10,595	11,013	11,258

Direct Labor Hours: Direct labor hours reflect slight increases across all years consistent with anticipated new orders.

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

<u>Unit Cost (Expense Rate):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$2,147.6	\$2,186.7	\$2,280.6
Workload (DLHs) (Millions)	10,595	11,013	11,258
Unit cost (per DLH)	\$202.70	\$198.55	\$202.58

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 increased indirect and direct costs required to meet throughput.

<u>Stabilized / Composite Rates (Revenue Rate):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized / Composite Rate	\$187.22	\$236.55	\$212.21
Change from Prior Year		\$49.33	(\$24.34)
Composite Rate Change		26.35%	-10.29%

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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 revenue rate charged to customers incorporates both the stabilized costs and the reimbursable costs. The FY 2018 composite hourly rate reflects an decrease of \$24.34 from FY 2017, resulting from an increase in rate-setting hours. The rate changes include additional direct and indirect expenses necessary to support throughput.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

AIRFRAMES	390	413	491
O&M,N	343	371	442
O&M,NR	23	16	19
RDT&E	10	9	13
Other	14	17	17
ENGINES	1,660	1,425	1,528
O&M,N	1,563	1,366	1,466
O&M,NR	26	21	21
RDT&E	12	0	0
Other	59	38	41
COMPONENTS			
Working Capital Fund (NSF (7R)	34,133	37,684	37,684
<u>Performance Indicators:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Aircraft Completed	389	514	485
Aircraft Completed on Time	350	463	437
% Scheduled Work Completed on Time	90.0%	90.0%	90.0%
Engines Completed	1,760	1,473	1,563
Engines Completed on Time	1,584	1,326	1,407
% Scheduled Work Completed on Time	90.0%	90.0%	90.0%
Components Completed	30,071	32,095	32,095
Components Completed on Time	28,567	30,490	30,490
% Scheduled Work Completed on Time	95.0%	95.0%	95.0%
Inventory Turnover	2.5	2.6	2.7

Planned Schedule Conformance percentages and Inventory Turnover Ratios are consistent with historical data.

Narrative

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	10,004	9,964	9,995
Civilian Workyears (straight time)	9,594	9,776	9,872
Military End Strength	121	122	129
Military Workyears	121	122	129

Civilian Personnel: Civilian personnel staffing will be sized to meet anticipated workload from customers. Current projections reflect a leveling off of Civilian Personnel after significant growth in FY 2015 and FY 2016.

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):

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$27.5	\$31.9	\$21.2
Equipment, ADPE / Telecom	\$19.2	\$12.5	\$9.9
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$1.7</u>	<u>\$6.2</u>	<u>\$6.6</u>
Total	<u>\$48.4</u>	<u>\$50.6</u>	<u>\$37.7</u>

Some totals may not add due to rounding.

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 Navy and Marine Corps' minimum 6% Depot Capital Investment target in the future. The FY 2016 and FY 2017 CIP programs each include an approximately \$9M Capital Surcharge.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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<u>Carryover Compliance (Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$938.8	\$903.2	\$1,020.9
Allowable Carryover	\$771.3	\$990.7	\$1,037.1
Calculated Actual Carryover	\$741.8	\$894.4	\$946.8
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$29.5)	(\$96.3)	(\$90.2)
<i>Some totals may not add due to rounding.</i>			

Carryover was slightly over the allowable ceiling in FY 2016. A carryover waiver in the amount of \$45.6 million was requested and approved.

- \$30.9 million for 4th Qtr non-Navy workload
- \$14.7 million for crash damaged aircraft

Carryover growth is primarily due to FA-18 and components workload. Carryover growth related to FA-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 and above findings that must be analyzed and repaired. This additional analysis and repair increases TAT. The average TAT for Planned Maintenance Interval 1 (PMI1) event is 623 days, and the average TAT for 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 to complete this critical workload.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	1,983.5	2,304.4	2,342.7
Capital Surcharges	8.8	9.3	0.0
Capital Investment Recovery	31.4	35.5	37.7
Other Income			
Total Income	2,023.7	2,349.3	2,380.4
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	9.7	10.6	10.9
Civilian Personnel Compensation & Benefits	939.6	966.1	1,005.1
Travel and Transportation of Personnel	15.3	19.4	16.9
Material & Supplies (Internal Operations)	576.0	588.1	631.2
Equipment	245.4	244.8	276.2
Other Purchases from NWCF	18.2	16.7	14.8
Transportation of Things	4.3	3.7	2.6
Capital Investment Recovery	31.4	35.5	37.7
Printing and Reproduction	1.0	1.2	1.2
Advisory and Assistance Services	0.1	0.0	0.0
Rent, Communication, Utilities & Misc Charges	45.6	42.1	38.8
Other Purchased Services	275.3	261.9	244.3
Total Expenses	2,161.8	2,189.8	2,279.8
Work in Process Adjustment	-11.0	-3.1	0.8
Comp Work for Activity Retention Adjustment	-3.2	0.0	0.0
Cost of Goods Sold	2,147.6	2,186.7	2,280.6
Operating Result	-124.0	162.5	99.8
Adjustments Affecting NOR	-8.8	-9.3	0.0
Capital Surcharges	-8.8	-9.3	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	-132.8	153.2	99.8
PY AOR	-120.2	-253.0	-99.8
TOTAL AOR	-253.0	-99.8	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	-253.0	-99.8	0.0

Exhibit Fund-14 Revenue and Expenses

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	1,988.1	2,466.9	2,426.6
a. Orders from DoD Components:	1,331.2	1,636.4	1,597.7
Department of the Navy	1,267.0	1,551.7	1,505.9
O & M, Navy	964.1	1,138.5	1,090.2
O & M, Marine Corps	3.4	3.6	3.5
O & M, Navy Reserve	33.7	31.7	30.7
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	225.7	343.8	337.2
Weapons Procurement, Navy	0.0	0.0	0.0
Ammunition Procurement, Navy/MC	1.0	1.3	1.1
Shipbuilding & Conversion, Navy	6.9	3.5	1.2
Other Procurement, Navy	3.1	2.0	1.8
Procurement, Marine Corps	0.2	0.0	0.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	28.8	27.3	40.2
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	3.6	3.5	2.6
Army Operation & Maintenance	0.2	0.1	0.2
Army Res, Dev, Test, Eval	1.0	0.0	0.0
Army Procurement	2.4	3.4	2.4
Army Other	0.0	0.0	0.0
Department of the Air Force	55.5	77.1	85.1
Air Force Operation & Maintenance	52.6	67.6	76.7
Air Force Res, Dev, Test, Eval	0.4	0.0	0.0
Air Force Procurement	2.5	9.5	8.4
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	5.1	4.0	4.2
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	1.2	0.8	3.3
Res, Dev, Test & Eval Accounts	0.2	0.0	0.0
Procurement Accounts	3.6	3.2	0.8
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	524.3	689.0	690.3
c. Total DoD	1,855.5	2,325.3	2,288.1
d. Other Orders:	132.5	141.6	138.5
Other Federal Agencies	0.5	10.0	0.8
Foreign Military Sales	45.7	31.9	31.4
Non Federal Agencies	86.4	99.7	106.2
2. Carry-In Orders	938.8	903.2	1,020.9
3. Total Gross Orders	2,926.8	3,370.1	3,447.4
a. Funded Carry-Over before Exclusions	903.2	1,020.9	1,067.0
4. Revenue(-)	2,023.7	2,349.3	2,380.4
5. End of Year Work-In-Process (-)	26.0	29.0	28.1
6. FMS, BRAC, Other Federal, Non-Federal orders, Inst. MRTFB (-) and Waiver.	135.3	97.5	92.1
7. Funded Carryover	741.8	894.4	946.8

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

Exhibit Fund-11 Sources of New Orders & Revenue

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2016 Actuals	2,147.647
FY 2017 President's Budget:	2,178.506
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	0.000
Pricing Adjustments:	2.799
Civilian Personnel	3.174
Fuel Price Changes	-0.375
Program Changes:	16.506
Airframes work (<i>FA-18 & H-60</i>)	93.820
Engines work (<i>F414</i>)	-14.600
Components work (<i>Air Force TF34 & NSF</i>)	-58.177
Other Support work	-3.800
Modification work	-5.137
Product Support work	4.400
Other Changes:	-11.079
Depreciation	-3.023
Facilities Sustainment, Restoration & Modernization	-4.014
Defense Finance & Accounting Service	-0.061
General Materials & Supplies	-0.377
General Contractual Services (<i>ADP, Equipment Maintenance & Other Contracts</i>)	-3.604
FY 2017 Current Estimate:	2,186.732

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	2,186.732
Pricing Adjustments:	39.784
Annualization of Prior Year Pay Raises	5.715
Civilian Personnel	5.659
Military Personnel	0.056
FY 2018 Pay Raise	13.182
Civilian Personnel	13.031
Military Personnel	0.151
Fuel Price Changes	0.161
General Purchase Inflation	20.726
Productivity Initiatives and Other Efficiencies:	0.000
Program Changes:	59.596
Airframes work (<i>FA-18, H-60, H-53 & H-1</i>)	-16.014
Engines work (<i>F414</i>)	49.694
Components work	12.512
Other Support work	-1.331
Modification work	-1.188
Product Support work	15.923
Other Changes:	-5.491
Depreciation	2.239
Facilities Sustainment, Restoration & Modernization	3.915
Defense Finance & Accounting Service	0.079
General Materials & Supplies	-1.944
General Contractual Services (<i>ADP, Equipment Maintenance & Other Contracts</i>)	-9.780
FY 2018 Estimate:	2,280.621

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	20	\$27.510	26	\$31.941	12	\$21.225
	- Vehicles	0	\$0.000	0	\$0.000	0	\$0.000
	- Material Handling	0	\$0.000	0	\$0.000	1	\$0.287
	- Installation Security	0	\$0.000	0	\$0.000	0	\$0.000
	- Quality Control/Testing	6	\$5.784	6	\$6.125	1	\$0.370
	- Medical Equipment	0	\$0.000	0	\$0.000	0	\$0.000
	- Machinery	5	\$8.860	10	\$12.348	5	\$14.569
	- Support Equipment	9	\$12.866	10	\$13.468	5	\$5.999
2	ADPE and Telecom Equipment >= \$.250M	9	\$19.192	7	\$12.486	8	\$9.882
	- Computer Hardware (Production)	0	\$0.000	2	\$1.410	2	\$0.870
	- Computer Hardware (Network)	3	\$5.816	4	\$9.576	4	\$7.452
	- Computer Software (Operating)	6	\$13.376	0	\$0.000	1	\$0.970
	- Telecommunications	0	\$0.000	1	\$1.500	1	\$0.590
	- 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)	6	\$1.696	16	\$6.156	7	\$6.600
	- Replacement Capability	6	\$1.696	15	\$5.956	6	\$5.600
	- New Construction	0	\$0.000	1	\$0.200	1	\$1.000
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	Grand Total	35	\$48.398	49	\$50.583	27	\$37.707
	Total Capital Outlays		\$37.766		\$47.167		\$43.882
	Total Depreciation Expense		\$31.358		\$35.486		\$37.725

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Depot Maintenance		#001 - Non-ADP Equipment					Fleet Readiness Centers		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	\$0	0	0	\$0	0	0	\$0
Material Handling	0	0	\$0	0	0	\$0	1	287	\$287
Installation Security	0	0	\$0	0	0	\$0	0	0	\$0
Quality Control/ Testing	6	964	\$5,784	6	1,021	\$6,125	1	370	\$370
Medical Equipment	0	0	\$0	0	0	\$0	0	0	\$0
Machinery	5	1,772	\$8,860	10	1,235	\$12,348	5	2,914	\$14,569
Support Equipment	9	1,430	\$12,866	10	1,347	\$13,468	5	1,200	\$5,999
Total	20	1,376	\$27,510	26	1,229	\$31,941	12	1,769	\$21,225
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 unsafe, beyond economical repair, or inoperative and unusable assets; and environmental, hazardous waste reduction, or regulatory agency (state, local, or Federal) mandated requirements. For each project alternatives were considered, but the procurement is the most cost effective for the government. Examples of Quality Control/Testing purchases include test stands, a test cell, and radar ranges: Upgrade Radar Ranges Project will upgrade existing radar ranges in Building 168A, to include the electronic systems and controls of these radar ranges. The existing equipment was originally purchased and installed at Norfolk in 1987, then moved to Jacksonville in 1996. A partial upgrade of the radome range controls was completed approximately 10 years ago. The upgrade is already outdated, and obtaining the proper resolution for testing modern radomes is difficult to achieve. The ranges have become obsolete and partially unsupportable. Replacement of the antiquated electronics will improve supportability and reliability of the radar ranges. Many of the components in the electronics rack are unsupportable. The Original Equipment Manufacturer (OEM) is the only source of repair left. They have indicated that there are many parts they no longer produce and are not able to properly repair. If one of these components fails, the equipment will be permanently downed.									

- **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 cannot 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):

- **Vertical Grinder**

This project will replace an existing Vertical Grinder, manufactured in 2005, to maintain capability and increase versatility. Existing machine is becoming less reliable and therefore unable to machine parts to required tolerances. The wear on the existing machine is now equal to the tolerance band of the part. Parts processing time increases as operator corrects for increasing machine wear. The proposed unit will be able to machine and measure parts to the required tolerances. It will simplify featuring, thus reducing set-up time. New machine will include latest numerical control electronics, in-process gauging, high-pressure coolant for cleaning the grinding wheel and deburring the part, and will meet all regulations for safety and environmental standards. Impact if not replaced include the eventual loss of capability on this single point failure grinder. Alternatives have been considered, but replacement is the most cost effective for the government.

- **Horizontal Boring Mill (HBM)**

This project will replace a 44 year old HBM used to machine beryllium components. This project supports multiple components for the FA-18, E2-C2, T34, and T44 aircraft. Specific components include: FA-18 tail hooks, steering collars, levers, trunions, and spindles. The existing HBM no longer complies with Occupational Safety and Health Administration (OSHA) beryllium machining requirements and has a temporary permit to operate. The HBM leaks oil, loses tolerances, and has been down for repairs 5 months since 2013. Significant safety improvements include material guards to prevent beryllium chips from falling on the ground, wet process to minimize beryllium dust in the atmosphere, and increased accuracy to 0.0005”. Impacts if not replaced include OSHA shut down of beryllium milling on components and a backlog increase. This machine is a single point of failure for beryllium milling. Alternatives have been considered, but replacement is the most cost effective for the government.

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

- **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 a long period of time. The new machine will provide technological improvements, have less frequent maintenance, 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 another 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, GAMP55108, 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 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.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Depot Maintenance		#002 - ADP Equipment					Fleet Readiness Centers		
ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	0	0	\$0	2	705	\$1,410	2	435	\$870
Computer Hardware (Network)	3	1,939	\$5,816	4	2,394	\$9,576	4	1,863	\$7,452
Computer Software (Operating System)	6	2,229	\$13,376	0	0	\$0	1	970	\$970
Telecommunications	0	0	\$0	1	1,500	\$1,500	1	590	\$590
Other Support Equipment	0	0	\$0	0	0	\$0	0	0	\$0
Total	9	2,132	\$19,192	7	1,784	\$12,486	8	1,235	\$9,882
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 Computer Software (Operating Systems) includes the Advanced Skills Management (ASM) project.

- **Advanced Skills Management (ASM)**

This project will procure the ASM software system. ASM is a COMFRC enterprise solution that will provide a standardized system to track the qualifications, certifications, and licenses of personnel. The current methods used for tracking qualifications are the Employee Master Maintenance Application (EMMA) and a host of manual paper-based solutions, Microsoft Excel and Electronic Individual Qualification Records, across the enterprise. The EMMA system is an antiquated software system currently hosted in a Jacksonville datacenter which has been mandated for closure by the Chief of Naval Operations. ASM will allow transparency of naval personnel records across the enterprise and automation of processes (e.g. recording training completions) that are currently performed manually. The selection of ASM over other alternatives will allow for a standard training system of record throughout all three levels of Naval Aviation Maintenance. ASM is currently the Navy and Marine Corps training system of record for all active duty personnel across the first and second levels of Naval Aviation Maintenance. The impact of not purchasing ASM is the loss of data and automation of qualification tracking with the loss of the current EMMA system. Alternatives have been considered, but ASM is the most cost effective as an enterprise solution.

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) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Depot Maintenance		#004 - Minor Construction (\$250K - \$1,000K)					Fleet Readiness Centers		
Minor Construction	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	6	283	\$1,696	15	397	\$5,956	6	933	\$5,600
New Construction	0	0	\$0	1	200	\$200	1	1,000	\$1,000
Environmental Capability	0	0	\$0	0	0	\$0	0	0	\$0
Total	6	283	\$1,696	16	385	\$6,156	7	943	\$6,600
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									

- **Laser Shock Peening Site**

In order to provide Laser Shock Peening (LSP) capabilities in support of the F-35, a new site platform needs to be designed and built. LSP capability must be co-located with the F-35B Block-2 Mod which is already in place at FRCE. The site preparation is required to support the necessary equipment to repair, via LSP, multiple aircraft over a 7-year period. This effort is a high priority for FRCE as well as the F-35 Joint Program Office as this process is required for the flight safety of 87 aircraft that run the risk of being grounded. The first aircraft induction November 2017. A temporary facility will be used until this permanent area is completed.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$35.623	\$27.510	(\$8.112)	
			Installation Security	\$0.409	\$0.000	(\$0.409)	One decrease
			Quality Control/Testing	\$7.745	\$5.784	(\$1.961)	One new, one increase, two decrease, one canceled, and one deferred
			Machinery	\$9.742	\$8.860	(\$0.882)	One new, one increase, one decrease, and two deferred
			Support Equipment	\$17.727	\$12.866	(\$4.860)	One increase, four decrease, and five deferred
	2	ADP		\$14.598	\$19.192	\$4.592	
			Computer Software (Operating System)	\$13.254	\$13.376	\$0.120	One new
			Computer Hardware (Network)	\$1.344	\$5.816	\$4.472	Two new
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$1.780	\$1.696	(\$0.084)	
			Replacement	\$1.780	\$1.696	(\$0.084)	One new, three decrease, and one deferred
TOTAL FY 2016 CIP Program				\$52.001	\$48.398	(\$3.604)	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$41.002	\$31.941	(\$9.061)	
			Quality Control/Testing	\$5.375	\$6.125	\$0.750	Two new, one deferred
			Machinery	\$22.319	\$12.348	(\$9.971)	Six new, one increase, one decrease, six deferred, and three cancelled
			Support Equipment	\$13.308	\$13.468	\$0.160	Two new and one deferred
	2	ADP		\$1.500	\$12.486	\$10.986	
			Computer Hardware (Production)	\$0.000	\$1.410	\$1.410	Two new
			Computer Hardware (Network)	\$0.000	\$9.576	\$9.576	Four new
			Telecommunications	\$1.500	\$1.500	\$0.000	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$5.180	\$6.156	\$0.976	
			Replacement	\$5.180	\$5.956	\$0.776	Eleven new, one increase, and four deferred
			New Construction	\$0.000	\$0.200	\$0.200	One new
TOTAL FY 2017 CIP Program				\$47.682	\$50.583	\$2.901	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$21.225	\$21.225	\$0.000	
			Quality Control/Testing	\$0.370	\$0.370	\$0.000	
			Machinery	\$14.569	\$14.569	\$0.000	
			Support Equipment	\$5.999	\$5.999	\$0.000	
			Material Handling	\$0.287	\$0.287	\$0.000	
	2	ADP		\$9.882	\$9.882	\$0.000	
			Computer Hardware (Production)	\$0.870	\$0.870	\$0.000	
			Computer Hardware (Network)	\$7.452	\$7.452	\$0.000	
			Computer Software (Operating System)	\$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	\$6.600	\$0.000	
			Replacement	\$5.600	\$5.600	\$0.000	
			New Construction	\$1.000	\$1.000	\$0.000	
TOTAL FY 2018 CIP Program				\$37.707	\$37.707	\$0.000	

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CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Part 1			
1. Net Carry-In	938.8	903.2	1,020.9
2. Revenue	2,023.7	2,349.3	2,380.4
3. New Orders	1,988.1	2,466.9	2,426.6
4. Exclusions:			
Foreign Military Sales	45.7	31.9	31.4
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	0.5	10.0	0.8
Non-Federal and Others	86.4	99.7	106.2
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	1,855.5	2,325.3	2,288.1
6. Weighted Average Outlay Rate	63.5%	62.7%	62.7%
7. Carryover Rate	36.5%	37.3%	37.3%
8. Allowable Carryover	771.3	990.7	1,037.1
Allowable Carryover(First Year)	677.3	867.3	853.4
Allowable Carryover (Second Year Procurement-funded Orders)	94.0	123.3	183.6
Part II			
9. Balance of Customer Order at Year End	903.2	1,020.9	1,067.0
10. Work-in-progress	26.0	29.0	28.1
11. Exclusions:			
Foreign Military Sales	49.3	49.8	47.7
Base Realignment and Closure	0.0	0.0	0.0
Other Federal Department and Agencies	11.9	13.8	11.8
Non-Federal and Others	28.6	33.9	32.5
Institutional Major Range & Test Facility Base	0.0	0.0	0.0
OUSD(C) Approved Carryover Waiver	45.6	0.0	0.0
12. Calculated Actuals Carryover	741.8	894.4	946.8

Some totals may not add due to rounding.

EXWC,NSWC,NUWC,NAWC DIV,SPAWAR,NRL use RD TEN rates.

FY 2016

Exhibit Fund-16 Material Inventory Data

**MATERIAL INVENTORY DATA
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

FY 2017

		<u>Total</u>		<u>Mobilization</u>		----- Peacetime -----		
						<u>Operating</u>	<u>Other</u>	
Material Inventory BOP	\$	23.8	\$	-	\$	23.8	\$	-
<u>Purchases</u>								
A. Purchases to Support Customer Orders	\$	832.9	\$	-	\$	832.9	\$	-
B. Purchase of long lead items in advance of customer orders		-		-		-		-
C. Other Purchases		-		-		-		-
D. Total Purchases	\$	832.9	\$	-	\$	832.9	\$	-
<u>Material Inventory Adjustments</u>								
A. Material Used in Maintenance	\$	842.8	\$	-	\$	842.8	\$	-
B. Disposals, theft, losses due to damages		-		-		-		-
C. Other reductions		-		-		-		-
D. Total inventory adjustments	\$	842.8	\$	-	\$	842.8	\$	-
Material Inventory EOP	\$	13.9	\$	-	\$	13.9	\$	-

FY 2018

Exhibit Fund-16 Material Inventory Data

DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - FLEET READINESS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	REVENUE (Maintenance, Repair, Overhaul) <u>3 year average</u>			<u>BUDGETED CAPITAL</u> (Modernization, Efficiency)		
	FY 13-15	FY 14-16	FY 15-17	FY 2016	FY 2017	FY 2018
	1,934.5	1,938.4	1,913.9			
	1,938.4	1,913.9	2,023.7			
	1,913.9	2,023.7	2,349.2			
Revenue (Avg)	1,928.9	1,958.7	2,095.6			
Working Capital Fund (Avg)	1,928.9	1,958.7	2,095.6			
Appropriations (Avg)	0.0	0.0	0.0			
Total Revenue (Avg)	1,928.9	1,958.7	2,095.6			
WCF Depot Maintenance Capital Investment						
Facilities/ Work Environment				34.9	46.5	46.8
Equipment				46.7	44.4	31.1
Equipment (Non-Capital Investment Program)				10.0	9.7	8.7
Processes				1.2	0.5	0.5
Total WCF Investment				92.8	101.1	87.1
Appropriated Funding - List by Appropriation						
MILCON				2.4	2.5	15.6
Procurement				2.9	3.0	67.2
Operation & Maintenance				4.7	4.8	4.9
Total Appropriated Funding				10.0	10.3	87.7
Component Total				102.8	111.4	174.8
Minimum 6% Investment				115.7	117.5	125.7
Investment Over/Under Requirement				-12.9	-6.1	49.1
				5.3%	5.7%	8.3%

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2. Marine Corps Depots

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NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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 Navy (DON), federal and non-federal customers' war fighting weapon systems. The 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.

The 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. The 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:

<u>Activities</u>	<u>Location</u>
Marine Depot Maintenance Command	Albany, GA
Marine Depot Maintenance Command	Barstow, CA

Significant Changes Since the FY 2017 President's Budget:

The MC DMAG's FY 2018 budget request reflects a reduction of \$156 million of workload previously included in FY 2016. The workload did not materialize as expected and the reduction resulted in \$93.7 million less in revenue than planned in FY 2016. In FY 2017 MC DMAG is projected to have a \$26 million decrease in new orders and produce \$56.9 million less in revenue than planned in the FY 2017 President's Budget.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$375.7	\$352.4	\$323.0
Revenue	\$469.1	\$404.0	\$304.2
Expense	<u>\$469.5</u>	<u>\$396.3</u>	<u>\$312.1</u>
Operating Results	-\$0.4	\$7.7	-\$7.9
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	-\$0.4	\$7.7	-\$7.9
Prior Year AOR	\$0.6	\$0.2	\$7.9
Other Changes Affecting AOR	\$0.0	\$0.0	\$0.0
Accumulated Operating Results (AOR)	<u>\$0.2</u>	<u>\$7.9</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Orders, Revenue and Expense:

Orders - Reimbursable orders for FY 2016 were \$375.7 million. New orders are projected to be \$352.4 million in FY 2017 and \$323.0 million in FY 2018. Budgeting for workload from non-organic sources was based upon letters of intent from customers. The fluctuation in new orders across all years is due to anticipated reductions in workload from other services and decreases in reset workload, which has accounted for the majority of throughput since FY 2012.

Revenue - Total revenue was \$469.1 million for FY 2016, and budgeted to be \$404 million for FY 2017 and \$304.2 million for FY 2018. As MC DMAG typically utilizes contracted workforce to support surges in workload, the FY 2016 workload revisions and subsequent adjustments to carryover projections resulted in MC DMAG budgeting for less contractors in the FY 2018 budget. The additional workforce that was planned in the FY 2017 President's Budget will not be utilized due to the workload decreases.

Expenses - Total expenses were \$469.5 million in FY 2016, and projected to be \$396.3 million in FY 2017, and \$312.1 million in FY 2018.

Net Operating Results (NOR) - NOR was -\$0.4 million for FY 2016, and is expected to be \$7.7 million for FY 2017, and -\$7.9 million for FY 2018.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$467.1	\$408.9	\$322.9
Disbursements	<u>\$465.8</u>	<u>\$431.6</u>	<u>\$325.7</u>
Net Outlays	<u>\$1.3</u>	<u>-\$22.7</u>	<u>-\$2.8</u>

Some totals may not add due to rounding.

The MC DMAG's End of Year (EOY) FY 2016 cash balance was \$81 million. The FY 2017 cash balance is expected to be \$58.3 million. The FY 2018 cash balance is projected to be \$55.6 million due to a return of prior year AOR.

Workload:

FY 2016 workload decreased due to Marine Corps and Air Force Mine Resistant Ambush Protected Vehicle (MRAP) workload that did not materialize. This reduction in planned workload, in concert with a projected downward trend in reset workload, FY 2017 and FY 2018 new orders are decreased to \$352.4 million and \$323 million respectively.

<u>Direct Labor Hours (DLHs) (Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	3,273	3,139	2,307

Decrease in workload caused a slight decrease in direct labor hours in FY 2017 compared to FY 2016. A more significant decrease is planned in FY 2018. This is attributed to the projected reduction of Overseas Contingency Operations (OCO) appropriations funded to customers and a reduction in carryover workload which influence the amount of DLHs that can be executed.

Performance Indicators:

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

<u>Unit Cost (Expense Rate):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$469.5	\$396.3	\$312.1
Workload (DLHs) (Millions)	3,273	3,139	2,307
Unit cost (per DLH)	\$143.44	\$126.27	\$135.29

Some totals may not add due to rounding.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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.

In FY 2016, MC DMAG executed a decreased amount of workload and direct labor hours compared to the FY 2017 President's Budget which contributed to a higher unit cost per DLH. In FY 2017 and FY 2018, MC DMAG is projected to execute less direct labor hours. Projected workload completion in FY 2017 will contribute to a lower unit cost per direct labor hour when compared to FY 2016. The decrease in both cost and DLH will result in a higher unit cost per direct labor hour in FY 2018.

FY 2018 unit cost reflects stabilized costs per associated stabilized hours as an expense rate.

<u>Stabilized / Composite Rates (Revenue Rate):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$127.51	\$132.66	\$131.53
Change from Prior Year		\$5.15	-\$1.13
Composite Rate Change		4.04%	-0.85%

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 revenue rate charged to customers incorporates both the stabilized costs and the reimbursable costs. The FY 2017 composite hourly rate reflects an increase of \$5.15 from FY 2016.

Summary of Workload Indicators:

<u>Performance Indicators:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Schedule Conformance	99.50%	99.50%	99.50%
Quality Deficiency Reports	0.10%	0.10%	0.10%
Inventory Turnover Ratio	6.1:1	5.4:1	4.8:1

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

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	1,437	1,470	1,458
Civilian Workyears (straight time)	1,529	1,480	1,478
Military End Strength	11	11	11
Military Workyears	0	11	11

Civilian Personnel: The 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.

Capital Investment Program (CIP):

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$1.5	\$3.4	\$4.7
Equipment, ADPE / Telecom	\$0.0	\$0.0	\$0.0
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$2.1</u>	<u>\$1.8</u>	<u>\$1.0</u>
Total	<u>\$3.6</u>	<u>\$5.2</u>	<u>\$5.7</u>

Some totals may not add due to rounding.

The Capital Investment Program assists the DMAG in achieving its mission by reinvesting in plant equipment and facilities. Included in the capital budget are the following types of assets: non-ADPE equipment and minor construction.

<u>Carryover Compliance (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$248.4	\$154.9	\$103.4
Allowable Carryover	\$154.0	\$141.9	\$132.9
Calculated Actual Carryover	\$152.1	\$100.5	\$119.3
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	-\$2.1	-\$41.4	-\$13.6

Some totals may not add due to rounding.

NARRATIVE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE – MARINE CORPS DEPOTS
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MAY 2017

In FY 2016, MC DMAG remained under the allowable carryover ceiling and plans to be under the projected allowable carryover ceilings in both FY 2017 and FY 2018.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Revenue:			
Gross Sales			
Operations	463.9	398.2	298.5
Capital Surcharges	0	0	0
Capital Investment Recovery	5.2	5.8	5.7
Other Income			
Total Income	469.1	404	304.2
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.8	0.8	0.9
Civilian Personnel Compensation & Benefits	152.3	152.2	150.9
Travel and Transportation of Personnel	3	2.3	1.7
Material & Supplies (Internal Operations)	164	97.3	67.4
Equipment	16.9	9.2	8.8
Other Purchases from NWCF	1.2	2.4	2.5
Transportation of Things	0	0	0
Capital Investment Recovery	5.2	5.8	5.7
Printing and Reproduction	0.1	0.2	0.2
Advisory and Assistance Services	0	0	0
Rent, Communication, Utilities & Misc Charges	5.3	9.1	7.2
Other Purchased Services	121.9	117	66.8
Total Expenses	470.7	396.3	312.1
Work in Process Adjustment	-1.2	0	0
Comp Work for Activity Retention Adjustment	0	0	0
Cost of Goods Sold	469.5	396.3	312.1
Operating Result	-0.4	7.7	-7.9
Adjustments Affecting NOR	5.4	0	0
Capital Surcharges	0	0	0
Extraordinary Expenses Unmatched	0	0	0
Other Changes Affecting NOR (All Others)	5.4	0	0
Net Operating Result	-0.4	7.7	-7.9
PY AOR	-4.8	0.2	7.9
TOTAL AOR	0.2	7.9	0
Non-Recoverable Adjustments impacting AOR	0	0	0
AOR for budget purposes	0.2	7.9	0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	375.7	352.4	323
a. Orders from DoD Components:	364.9	345.6	315.3
Department of the Navy	310.9	320.6	288.4
O & M, Navy	1.7	5.6	2.1
O & M, Marine Corps	306.7	315	276.3
O & M, Navy Reserve	0	0	0
O & M, Marine Corp Reserve	4.4	0	6.5
Aircraft Procurement, Navy	0.2	0	0
Weapons Procurement, Navy	0.1	0	0
Ammunition Procurement, Navy/MC	0	0	0
Shipbuilding & Conversion, Navy	0	0	0
Other Procurement, Navy	0	0	0
Procurement, Marine Corps	2	0	3.5
Family Housing, Navy/MC	0	0	0
Research, Dev., Test, & Eval., Navy	0.2	0	0
Military Construction, Navy	0	0	0
National Defense Sealift Fund	0	0	0
Other Navy Appropriations	0	0	0
Other Marine Corps Appropriations	0	0	0
Department of the Army	15.1	23.5	25.4
Army Operation & Maintenance	14.9	23.5	25.4
Army Res, Dev, Test, Eval	0.3	0	0
Army Procurement	0	0	0
Army Other	0	0	0
Department of the Air Force	38.9	1.5	1.5
Air Force Operation & Maintenance	38.9	1.5	1.5
Air Force Res, Dev, Test, Eval	0	0	0
Air Force Procurement	0	0	0
Air Force Other	0	0	0
DOD Appropriation Accounts	0	0	0
Base Closure & Realignment	0	0	0
Operation & Maintenance Accounts	0	0	0
Res, Dev, Test & Eval Accounts	0	0	0
Procurement Accounts	0	0	0
Defense Emergency Relief Fund	0	0	0
DOD Other	0	0	0
b. Orders from other Fund Activity Groups	9.6	6.3	7.2
c. Total DoD	374.5	351.9	322.5
d. Other Orders:	1.2	0.6	0.5
Other Federal Agencies	0	0	0
Foreign Military Sales	1.1	0.6	0.5
Non Federal Agencies	0.1	0	0
2. Carry-In Orders	248.4	154.9	103.4
3. Total Gross Orders	624	507.4	426.3
a. Funded Carry-Over before Exclusions	154.9	103.4	122.1
4. Revenue(-)	469.1	404	304.2
5. End of Year Work-In-Process (-)	2	2	2
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	0.9	0.9	0.9
7. Funded Carryover	152	100.5	119.3

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
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2016 Estimated Actuals	469.5
FY 2017 President's Budget:	456.2
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	0.0
Pricing Adjustments:	-0.2
Civilian Personnel	0.6
Fuel Price	-0.8
Program Changes:	-13.7
Marine Depot Maintenance Command Consolidation	-2.2
Direct Labor	8.5
Direct Material and Supplies	-25.1
Direct Contract Services	2.2
Direct Other Purchases	2.9
Other Changes:	-46.0
Capital Investment Recovery	0.6
Facilities Sustainment, Restoration & Modernization	-15.2
Indirect Labor	-32.2
Indirect Material	-0.4
Vera/Vsip	-0.3
Other	1.5
FY 2017 Current Estimate:	396.3

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	396.3
Pricing Adjustments:	5.5
Annualization of Prior Year Pay Raises	0.6
Civilian Personnel	0.6
Military Personnel	0.0
FY 2018 Pay Raise	1.8
Civilian Personnel	1.8
Military Personnel	0.0
Fuel Price Changes	0.0
General Purchase Inflation	4.0
Other Price Changes (list)	-0.9
Material/Supplies/Equipment	-0.9
Productivity Initiatives and Other Efficiencies:	-2.2
Marine Depot Maintenance Command Consolidation	-2.2
Program Changes:	-60.7
Direct Labor	-3.3
Direct Material and Supplies	-18.8
Direct Contract Services	-38.0
Direct Other Purchases	-0.6
Other Changes:	-26.8
Capital Investment Recovery	-0.1
Facilities Sustainment, Restoration & Modernization	-16.0
Indirect Labor	0.5
Indirect Material	1.1
Vera/Vsip	-12.8
Other	0.5
FY 2018 Estimate:	312.1

CAPITAL INVESTMENT SUMMARY DEPARTMENT OF THE NAVY DEPOT MAINTENANCE - MARINE CORPS DEPOTS FISCAL YEAR (FY) 2018 BUDGET ESTIMATES MAY 2017 (DOLLARS IN MILLIONS)							
Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	3	\$1.521	4	\$3.400	4	\$4.730
	- 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	1	\$0.437	3	\$1.650	2	\$0.880
	- Support Equipment	2	\$1.084	1	\$1.750	2	\$3.850
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 <= \$2.000M)	4	\$2.105	4	\$1.750	1	\$0.990
	- Replacement Capability	1	\$0.415	0	\$0.000	0	\$0.000
	- New Construction	2	\$1.358	4	\$1.750	1	\$0.990
	- Environmental Capability	1	\$0.332	0	\$0.000	0	\$0.000
	Grand Total	7	\$3.626	8	\$5.150	5	\$5.720
	Total Capital Outlays		\$4.517		\$5.524		\$5.685
	Total Capital Investment Recovery		\$5.224		\$5.779		\$5.728

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Depot Maintenance	#001 - Non-ADP Equipment						Marine Corps Depots		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	\$0	0	0	\$0	0	0	\$0
Material Handling	0	0	\$0	0	0	\$0	0	0	\$0
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	1	437	\$437	3	550	\$1,650	2	440	\$880
Support Equipment	2	542	\$1,084	2	875	\$1,750	2	1,925	\$3,850
Total	3	507	\$1,521	5	680	\$3,400	4	1,183	\$4,730
Justification: FY 2016 Machinery Horizontal Boring Machine (Production Plant Barstow (PPB)) - \$437K The current and projected workloads for the machine shop at MDMC PPB mandates the full time use of two horizontal boring mills to keep up with the production rate and flow of work. Currently, PPB has one machine that is supporting operations and due to ongoing mechanical failures has only been operational during approximately sixty percent of the work year for the past two fiscal years 2014 and 2015. An additional horizontal boring machine must be procured to maintain productive output and control costs. Support Equipment Inline/Cross Drive Transmission Dyno Upgrade (PPB) - \$524K The Transmission Dynamometers that are currently in operations are from 10 to 14 years old, thereby outliving their peak efficiency years. PPB is experiencing numerous breakdowns which significantly affects our throughput and schedule. In addition, due to the age of our present equipment, parts are becoming increasingly difficult to obtain and many replacement parts must be custom fabricated at a higher cost. Procurement of a new Transmission Dynamometer Test Cell will help to reduce these problems and present the potential for annual cost savings. Nitrogen Generator for Laser Cutters (Production Plant Albany (PPA)) - \$560K This project was approved as a reprogramming effort for FY 2016. The proposed Nitrogen Generator System will supply a continuous flow of 99.99% pure nitrogen gas to laser cutting machines at PPA at a minimum pressure of 400psig. The system will include all necessary safety and environmental controls. The proposed system requires minimal maintenance and is equipped with a standby mode to accommodate times when the laser cutting machines are not in operation.									

CAPITAL INVESTMENT JUSTIFICATION			FISCAL YEAR (FY) 2018 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)			MAY 2017						
Department of the Navy/ Depot Maintenance	#001 - Non-ADP Equipment						Marine Corps Depots		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	\$0	0	0	\$0	0	0	\$0
Material Handling	0	0	\$0	0	0	\$0	0	0	\$0
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	1	437	\$437	3	550	\$1,650	2	440	\$880
Support Equipment	2	542	\$1,084	2	875	\$1,750	2	1,925	\$3,850
Total	3	507	\$1,521	5	680	\$3,400	4	1,183	\$4,730

Justification:

FY 2017

Machinery

Intermediate CNC Lathe (PPA) - \$300K The existing large cutting lathe has exceeded its life expectancy. The new 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 and is expected to be in constant use.

CNC Crankshaft Grinder (PPA) - \$750K The proposed new crankshaft grinder will be a modern CNC machine capable of handling the crankshafts from all engines supplied with the ground combat vehicles repaired at the production plant. The proposed machine will incorporate the latest technology for enhanced efficiency and operator safety. Many parts for the existing machine have become obsolete and the original manufacturer support no longer exists.

Vertical Machine Center (PPB) - \$600K The purchase of a Vertical Machine Center will allow the specific dedication of the machine to work in unison for high speed production, thereby reducing cycle time and reducing operational cost associated with this type of production. Our current equipment is well over 20 years old, and many of the safety features found with today's modern machinery does not exist. The dedicated machine center cell will help reduce valuable labor hours setting up and taking down tooling from various machines.

Support Equipment

Inline/Cross Drive Transmission Dyno Upgrade (PPA) - \$750K To support workload requirements PPA requires the procurement of Inline/Cross Drive Transmission Dynamometer Test Cell to support production. It is estimated that replacement of Transmission Dynamometers can increase throughput.. Current and projected transmission workloads demand a testing rate, which exceeds the overall productive output capacity of the current transmission dynamometer test facility. This could lead to possibly outsourcing some of our transmission dynamometer testing in order to keep pace with production rates. This would lead to increased production costs and increases in repair cycle time. The current productive capacity also limits our ability to take on additional workloads, which may occur as a result of increased customer requirements or wartime expedited demand.

Component Blast Equipment (PPA) - \$1,000K This proposed equipment procurement will provide a safe and efficient means of blasting vehicle components in preparation for painting. Moreover, the proposed system will allow for multiple parts to be fed and blasted simultaneously; therefore reducing labor costs for material handling and blasting personnel. The productivity savings will be derived from the reduction in man-hours, material cost, and waste disposal costs.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Depot Maintenance	#001 - Non-ADP Equipment						Marine Corps Depots		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	\$0	0	0	\$0	0	0	\$0
Material Handling	0	0	\$0	0	0	\$0	0	0	\$0
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	1	437	\$437	3	550	\$1,650	2	440	\$880
Support Equipment	2	542	\$1,084	2	875	\$1,750	2	1,925	\$3,850
Total	3	507	\$1,521	5	680	\$3,400	4	1,183	\$4,730
Justification: FY 2018 Machinery Intermediate CNC Lathe (PPA) - \$300K The existing intermediate cutting 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 new 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 and is expected to be in constant use. CNC Crankshaft Grinder (PPA) - \$580K The proposed new crankshaft grinder will be a modern CNC machine capable of handling the crankshafts from all engines supplied with the ground combat vehicles repaired at the production plant. The proposed machine will incorporate the latest technology for enhanced efficiency and operator safety. Many parts for the existing machine have become obsolete and the original manufacturer support no longer exists. The efficiency of the new CNC machine versus the old conventional unit is expected to reduce machining time. Support Equipment 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. The proposed system will allow for multiple parts to be fed and blasted simultaneously; therefore reducing labor costs for material handling and blasting personnel. The intangible benefits will be increased operator safety and a more environmental friendly process. Inline/Cross Drive Transmission Upgrade (PPA) - \$2,600K To support workload requirements, PPA requires the procurement of Inline/Cross Drive Transmission Dynamometer Test Cell to support production efforts. Replacement of the Transmission Dynamometers creates potential to increase throughput. Current and projected transmission workloads demand a testing rate which exceeds the overall productive output capacity of the current transmission dynamometer test facility. This could lead to outsourcing some of the transmission dynamometer testing in order to keep pace with production rates. This would lead to increased production costs and increases in repair cycle time. Our current productive capacity also limits our ability to take on additional workloads, which may occur as a result of increased customer requirements and/or emergent requirements during wartime.									

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$1.652	\$1.521	-\$0.131	
			Machinery	\$0.442	\$0.437	-\$0.005	Funds for Boring Machine and reprogrammed funds to support FY14 Blast Project upgrades. Moved CNC Lathe (\$370K) to FY17 to provide additional funds needed for FY14 Blast projects.
			Support Equipment	\$1.210	\$1.084	-\$0.126	Funds for Inline/Crossdrive Dyno and Nitrogen Generation System. Reprogrammed B2222 Paint Pit Alteration to FY17 to accommodate purchase of Nitrogen Generation System.
2	ADP			\$0.000	\$0.000	\$0.000	
3	Software			\$0.000	\$0.000	\$0.000	
4	Minor Construction			\$3.010	\$2.105	-\$0.905	
			Replacement	\$0.600	\$0.415	-\$0.185	Funding for Inline/Crossdrive Dyno Reprogrammed B2222 Paint Pit Alteration to
			New Construction	\$1.980	\$1.358	-\$0.622	FY17 to accommodate purchase of B2296 Welding Ventilation System
			Environmental Capability	\$0.430	\$0.332	-\$0.098	Funds for B2296 Welding Ventilation
TOTAL FY 2016 CIP Program				\$4.662	\$3.626	-\$1.036	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$3.400	\$3.400	\$0.000	
			Machinery	\$1.650	\$1.650	\$0.000	Requests funding for CNC lathes and press brake to support current operating tempo and future requirements
			Support Equipment	\$1.750	\$1.750	\$0.000	Requests funding for tool room equipment upgrades
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			\$1.750	\$1.750	\$0.000	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$1.750	\$1.750	\$0.000	Requests 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	\$5.150	\$0.000	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$4.730	\$4.730	\$0.000	
			Machinery	\$0.880	\$0.880		Requests funding for CNC Lathe and CNC Crankshaft Grinder
			Support Equipment	\$3.850	\$3.850		Requests funding for Inline/CrossDrive Transmission Dyno Upgrades and Component Blast Equipment to support current operating tempo and future requirements
2	ADP			\$0.000	\$0.000	\$0.000	
3	Software			\$0.000	\$0.000	\$0.000	
4	Minor Construction			\$0.990	\$0.990	\$0.000	
			New Construction	\$0.990	\$0.990		Request funding to construct a new facility that will accommodate the repair of fiberglass body parts for various ground combat vehicles and engineering equipment. The facility shall protect employees and equipment from the elements and provide an acceptable air quality environment for fiberglass repair work.
TOTAL FY 2018 CIP Program				\$5.720	\$5.720	\$0.000	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Part I			
1. Net Carry-In	248.4	154.9	103.4
2. Revenue	469.1	404	304.2
3. New Orders	375.7	352.4	323
4. Exclusions:			
Foreign Military Sales	1.1	0.6	0.5
Base Realignment and Closure	0	0	0
Other Federal Department and Agencies	0	0	0
Non-Federal and Others	0.1	0	0
Institutional Major Range & Test Facility Base	0	0	0
OUSD(C) Approved Carryover Waiver	0	0	0
5. Orders for Carryover Calculation	374.5	351.8	322.5
6. Weighted Average Outlay Rate	60.2%	59.4%	58.8%
7. Carryover Rate	39.8%	40.6%	41.2%
8. Allowable Carryover	154.151	141.8308	132.87
Allowable Carryover(First Year)	149.051	142.8308	132.87
Allowable Carryover (Second Year Procurement-funded Orders)	5.1	-1.0	0
Part II			
9. Balance of Customer Order at Year End	154.9	103.4	122.1
10. Work-in-progress	2	2	2
11. Exclusions:			
Foreign Military Sales	0.6	0.6	0.6
Base Realignment and Closure	0.1	0.1	0.1
Other Federal Department and Agencies	0	0	0
Non-Federal and Others	0.1	0.1	0.1
Institutional Major Range & Test Facility Base	0	0	0
OUSD(C) Approved Carryover Waiver	0	0	0
12. Calculated Actuals Carryover	152.1	100.6	119.3

Some totals may not add due to rounding.

PY 2016

	Total	Mobilization	Operating	Other
Material Inventory BOP	\$ 75.9	\$ -	\$ 75.9	\$ -
<u>Purchases</u>				
A. Purchases to Support Customer Orders	\$ 141.3	\$ -	\$ 141.3	\$ -
B. Purchase of long lead items in advance of customer orders	-	-	-	-
C. Other Purchases	-	-	-	-
D. Total Purchases	\$ 141.3	\$ -	\$ 141.3	\$ -
<u>Material Inventory Adjustments</u>				
A. Material Used in Maintenance	\$ 151.4	\$ -	\$ 151.4	\$ -
B. Disposals, theft, losses due to damages	-	-	-	-
C. Other reductions	-	-	-	-
D. Total inventory adjustments	\$ 151.4	\$ -	\$ 151.4	\$ -
Material Inventory EOP	\$ 65.7	\$ -	\$ 65.7	\$ -

CY 2017

Exhibit Fund-16 Material Inventory Data

BY 2018

Exhibit Fund-16 Material Inventory Data

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DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN
DEPARTMENT OF THE NAVY
DEPOT MAINTENANCE - MARINE CORPS DEPOTS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	REVENUE (Maintenance, Repair, Overhaul) <u>3 year average</u>			<u>BUDGETED CAPITAL</u> (Modernization, Efficiency)		
	FY 13-15	FY 14-16	FY 15-17	FY 2016	FY 2017	FY 2018
	474.1	491.3	575.1			
	491.3	575.1	469.1			
	575.1	469.1	404.0			
Revenue (Avg)	513.5	511.8	482.7			
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				24.7	11.8	6.9
Equipment				3.6	5.2	5.7
Equipment (Non-Capital Investment Program)				0.0	0.0	0.0
Processes				0.0	0.0	0.0
Total WCF Investment				28.3	17.0	12.6
Appropriated Funding - List by Appropriation						
MILCON				0.0	0.0	36.5
Procurement				0.0	0.0	0.0
Operation & Maintenance				0.0	0.0	0.0
Total Appropriated Funding				0.0	0.0	36.5
Component Total				28.3	17.0	49.1
Minimum 6% Investment				30.8	30.7	29.0
Investment Over/Under Requirement				-2.5	-13.7	20.1
				5.5%	3.3%	10.2%

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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) 2018 BUDGET ESTIMATES
MAY 2017

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 (except antisubmarine warfare systems); 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 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 2017 President's Budget:

The FY 2017 budget estimate has been updated to reflect the actual civilian pay raise, an increase in direct labor hours associated with anticipated workload, and revised general inflation estimates to include fuel.

The FY 2018 budget estimate includes general inflation, a civilian pay raise, increased facility sustainment and additional overhead expenses related to implementation of Section 212 of the 2017 National Defense Authorization Act (NDAA). This budget request also includes an increase in civilian end strength to ensure the civilian workforce matches projected workload.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Financial Profile:

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

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$4,441.1	\$4,496.8	\$4,601.9
Revenue	\$4,562.4	\$4,628.2	\$4,712.8
Expense	<u>\$4,591.9</u>	<u>\$4,605.7</u>	<u>\$4,714.9</u>
Operating Results	(\$29.5)	\$22.6	(\$2.1)
Capital Surcharge	<u>(\$5.4)</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	(\$34.9)	\$22.6	(\$2.1)
Other Changes Affecting AOR	(\$0.4)	\$0.0	\$0.0
Accumulating Operating Result (AOR)	<u>(\$20.4)</u>	<u>\$2.1</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Revenue and Expense: The current estimate for orders in FY 2017 and FY 2018 are based on historical trends and inflationary changes. Increases in expenses are driven by inflationary changes along with an increase in overhead related to Section 212 of 2017 NDAA. Revenue is set to achieve zero AOR in FY 2018.

Collections/Disbursements/Outlays (\$Millions):

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$4,571.4	\$4,658.7	\$4,708.5
Disbursements	\$4,554.0	\$4,672.3	\$4,706.2
Net Outlays	<u>(\$17.4)</u>	<u>\$13.6</u>	<u>(\$2.3)</u>

Some totals may not add due to rounding.

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

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Workload:

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	19,681	19,568	19,544

The change in direct labor hours are estimated based on supporting customer workload and drives increased revenue.

Performance Indicators: The NAWC outputs are scientific and engineering designs, developments, tests, evaluations, analyses and fleet support in NAWC 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 NAWC, 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 NAWC stabilized pricing structure. The NAWC use total stabilized cost per direct labor hour as their performance criterion.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$1,731.2	\$1,761.4	\$1,832.7
Workload (DLHs) (000)	16,891	16,589	16,077
Unit cost (per DLH)	\$102.49	\$106.18	\$114.00

Unit Cost is an expense rate 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.

<u>Stabilized / Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$104.15	\$109.85	\$113.93
Change from Prior Year		5.47%	3.71%
Composite Rate Change		3.20%	2.66%

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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. The composite rate change in FY 2018 reflects adjustments to direct workload and pricing changes.

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	15,092	15,013	15,233
Civilian Workyears (straight time)	14,599	14,731	14,968
Military End Strength	209	195	191
Military Workyears	185	171	166

Civilian Personnel: The civilian resource estimates are a baseline projection of civilian resources necessary to fulfill programming objectives 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.

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$29.6	\$22.1	\$27.8
Equipment, ADPE / Telecom	\$9.3	\$6.2	\$7.2
Software Development	\$0.5	\$3.3	\$3.2
Minor Construction	<u>\$6.0</u>	<u>\$22.7</u>	<u>\$9.3</u>
Total	<u>\$45.4</u>	<u>\$54.3</u>	<u>\$47.6</u>

Some totals may not add due to rounding.

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

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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Laboratory Revitalization Program. The projects will replace aging temporary buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency.

<u>Carryover Compliance: (\$Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$2,454.1	\$2,332.8	\$2,201.4
Allowable Carryover	\$2,731.1	\$2,323.6	\$2,317.5
Calculated Actual Carryover	\$1,906.1	\$1,797.4	\$1,720.5
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$825.0)	(\$526.2)	(\$597.0)

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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Revenue:			
Gross Sales			
Operations	4,527.2	4,580.7	4,665.2
Capital Surcharges	5.4	-	-
Capital Investment Recovery	29.8	47.6	47.6
Other Income			
Total Income	4,562.4	4,628.2	4,712.8
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	15.0	14.3	13.9
Civilian Personnel Compensation & Benefits	2,042.3	2,060.7	2,133.9
Travel and Transportation of Personnel	82.1	60.3	60.4
Material & Supplies (Internal Operations)	378.5	405.5	412.3
Equipment	87.5	29.8	30.7
Other Purchases from NWCF	84.9	101.9	109.7
Transportation of Things	10.0	8.1	8.3
Capital Investment Recovery	29.8	47.6	47.6
Printing and Reproduction	0.8	0.9	0.9
Advisory and Assistance Services	0.2	0.2	0.2
Rent, Communication, Utilities & Misc Charges	50.5	74.8	73.2
Other Purchased Services	1,810.3	1,801.7	1,823.8
Total Expenses	4,591.9	4,605.7	4,714.9
Work in Process Adjustment	-	-	-
Comp Work for Activity Retention Adjustment	-	-	-
Cost of Goods Sold	4,591.9	4,605.7	4,714.9
Operating Result	(29.5)	22.6	(2.1)
Adjustments Affecting NOR	(5.8)	-	-
Capital Surcharges	(5.4)	-	-
Extraordinary Expenses Unmatched	-	-	-
Other Changes Affecting NOR (All Others)	(0.4)	-	-
Net Operating Result	(34.9)	22.6	(2.1)
PY AOR	14.9	(20.4)	2.1
TOTAL AOR	(20.4)	2.1	0.0
Non-Recoverable Adjustments impacting AOR	-	-	-
AOR for budget purposes	(20.4)	2.1	0.0

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	4,441.1	4,496.8	4,601.9
a. Orders from DoD Components:	4,037.0	4,206.7	4,191.6
Department of the Navy	3,630.5	3,947.5	3,690.3
O & M, Navy	653.5	547.5	616.1
O & M, Marine Corps	28.0	14.6	14.9
O & M, Navy Reserve	1.7	12.8	26.6
O & M, Marine Corp Reserve	0.0	-	-
Aircraft Procurement, Navy	780.1	956.3	789.1
Weapons Procurement, Navy	66.8	63.2	53.1
Ammunition Procurement, Navy/MC	19.8	59.4	34.1
Shipbuilding & Conversion, Navy	117.3	69.6	44.8
Other Procurement, Navy	193.0	156.8	165.4
Procurement, Marine Corps	24.0	7.6	9.2
Family Housing, Navy/MC	0.0	0.1	0.1
Research, Dev., Test, & Eval., Navy	1,744.0	2,059.0	1,936.5
Military Construction, Navy	0.5	0.5	0.5
National Defense Sealift Fund	1.7	-	-
Other Navy Appropriations	-	-	-
Other Marine Corps Appropriations	-	-	-
Department of the Army	93.9	62.9	131.6
Army Operation & Maintenance	32.3	18.5	48.0
Army Res, Dev, Test, Eval	25.2	17.6	29.4
Army Procurement	36.4	26.7	54.1
Army Other	0.0	0.0	0.0
Department of the Air Force	145.8	86.8	149.7
Air Force Operation & Maintenance	36.6	24.8	41.5
Air Force Res, Dev, Test, Eval	76.1	40.3	69.6
Air Force Procurement	33.1	21.7	38.7
Air Force Other	-	-	-
DOD Appropriation Accounts	166.7	109.6	220.0
Base Closure & Realignment	-	-	-
Operation & Maintenance Accounts	45.4	31.0	72.2
Res, Dev, Test & Eval Accounts	100.6	65.4	109.5
Procurement Accounts	13.8	9.2	32.7
Defense Emergency Relief Fund	0.1	-	-
DOD Other	7.0	4.1	5.6
b. Orders from other Fund Activity Groups	88.1	54.4	121.5
c. Total DoD	4,125.1	4,261.2	4,313.1
d. Other Orders:	316.0	235.6	288.7
Other Federal Agencies	51.7	31.7	50.3
Foreign Military Sales	238.6	187.2	220.2
Non Federal Agencies	25.8	16.7	18.2
2. Carry-In Orders	2,454.1	2,332.8	2,201.4
3. Total Gross Orders	6,895.2	6,829.6	6,803.2
a. Funded Carry-Over before Exclusions	2,332.8	2,201.4	2,090.5
4. Revenue(-)	4,562.4	4,628.2	4,712.8
5. End of Year Work-In-Process (-)	-	-	-
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	426.7	404.0	370.0
7. Funded Carryover	1,906.1	1,797.4	1,720.5

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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>Costs</u>
FY 2016 Estimated Actuals	4,591.9
FY 2017 President's Budget:	4,421.0
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	1.7
Impact of prior year NOR/AOR adjustments	1.7
Pricing Adjustments:	24.0
Civilian Personnel	26.1
Fuel Price	-2.2
Program Changes:	160.6
F-18 Series	12.3
EA-18G	14.5
Future Unmanned Carrier Based Strike System	-19.4
Next Generation Jammer	-5.0
Aircraft Support Equipment	50.2
Air Systems Support	26.4
(U) Strike Weapons Development	-2.0
Target Systems Development	-14.3
Enterprise Information Technology	-3.9
Mission Modules	-3.5
Next Generation Jammer	-5.0
Offensive Anti-Surface Warfare Weapon Development	-20.2
Small Diameter Bombs	-5.4
Tomahawk Mission Planning Center	-8.6
Weapons Maintenance	-2.6
F/A-18 Squardons	-13.6
Harm Improvement	-9.7
Common ECM Equipment	-5.6
(U) Joint Air-to-Ground Missile (JAGM)	6.0
Other - Miscellaneous	-1.8
Joint Strike Fighter (PEO JSF)	114.5
Precision Strike Weapons Program	29.3
C-2/E-2 Program	17.1
Multi-Mission Helicopters Program	9.2
Support/Commercial Derivative Aircraft Program	1.5
Other Changes:	-1.5
Depreciation	0.0
NGEN Contract Adjustment	-2.0
FECA	-0.1
DFAS	0.1
Facilities Sustainment, Restoration & Modernization	0.5
Other (list)	0.0
FY 2017 Current Estimate:	4,605.7

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>Costs</u>
FY 2017 Current Estimate:	4,605.7
Pricing Adjustments:	75.4
Annualization of Prior Year Pay Raises	8.0
Civilian Personnel	8.0
Military Personnel	0.1
FY 2018 Pay Raise	26.4
Civilian Personnel	26.2
Military Personnel	0.2
Fuel Price Changes	-5.4
General Purchase Inflation	43.3
Other Price Changes (list)	0.0
List	0.0
Productivity Initiatives and Other Efficiencies:	0.0
List	0.0
Program Changes:	-2.7
Air Systems Support	1.7
Joint Strike Fighter	1.4
F-18 Series	1.1
Aircraft Support Equipment	1.0
Next Generation Jammer	0.7
Offensive Anti-Surface Warfare Weapon Development	0.4
EA-18 Squadrons	0.2
Electronic Warfare (EW)	0.3
Harm Improvement	0.2
(U) Joint Air-to-Ground Missile (JAGM)	0.2
RDT&E Ship & Aircraft Support	0.4
Weapons Maintenance	1.0
Weapons Support	0.3
USMC Attact Helicopter Program (PMA 276)	3.3
Aviation Support Equipment	-8.8
Air Combat Electronics Program	-9.4
Other - Miscellaneous	3.3
Other Changes:	36.6
Depreciation	0.0
Facilities Sustainment, Restoration & Modernization	4.8
DFAS	0.0
NGEN Contract Adjustment	-0.1
FECA	0.0
Section 212 FY 2017 NDAA	46.3
Other - Fuel (Program Growth)	1.5
Other - Functional Transfer	3.6
Other - Re-baseline Rate Setting Year	-19.6
FY 2018 Estimate:	4,714.9

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CAPITAL INVESTMENT SUMMARY DEPARTMENT OF THE NAVY RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER FISCAL YEAR (FY) 2018 BUDGET ESTIMATES MAY 2017 (DOLLARS IN MILLIONS)							
Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	25	\$29.611	36	\$22.091	32	\$27.811
	- 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	14	\$20.383	18	\$11.300	17	\$14.400
	- Medical Equipment	0	\$0.000	0	\$0.000	0	\$0.000
	- Machinery	2	\$1.965	0	\$0.000	0	\$0.000
	- Support Equipment	9	\$7.263	18	\$10.791	15	\$13.411
2	ADPE and Telecom Equipment >= \$.250M	11	\$9.347	13	\$6.222	7	\$7.170
	- Computer Hardware (Production)	4	\$2.578	6	\$2.315	2	\$1.724
	- Computer Hardware (Network)	5	\$5.483	5	\$3.011	4	\$4.846
	- Computer Software (Operating)	1	\$0.650	1	\$0.490	1	\$0.600
	- Telecommunications	0	\$0.000	1	\$0.406	0	\$0.000
	- Other Support Equipment	1	\$0.636	0	\$0.000	0	\$0.000
3	Software Development >= \$.250M	2	\$0.510	7	\$3.257	5	\$3.242
	- Internally Developed	0	\$0.000	0	\$0.000	0	\$0.000
	- Externally Developed	2	\$0.510	7	\$3.257	5	\$3.242
4	Minor Construction (>= \$.250M and <= \$2.000M)	8	\$5.974	13	\$22.690	4	\$9.327
	- Replacement Capability	0	\$0.000	0	\$0.000	0	\$0.000
	- New Construction	8	\$5.974	13	\$22.690	4	\$9.327
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	Grand Total	46	\$45.442	69	\$54.260	48	\$47.550
	Total Capital Outlays		\$36.037		\$45.272		\$47.472
	Total Depreciation Expense		\$29.769		\$47.550		\$47.550

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development	#001 - Non-ADP Equipment						Naval Air Warfare Center		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	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	14	\$1,456	\$20,383	18	\$628	\$11,300	17	\$847	\$14,400
Medical Equipment	0		\$0	0		\$0	0		\$0
Machinery	2	\$983	\$1,965	0		\$0	0		\$0
Support Equipment	9	\$807	\$7,263	18	\$600	\$10,791	15	\$894	\$13,411
Total	25	\$1,184	\$29,611	36	\$614	\$22,091	32	\$869	\$27,811
Justification: 1. Projects within this sub-category will assist the Naval Air Warfare Center (NAWC) in its execution of new and ongoing engineering, research and development activities. Advances in the areas of research, development, engineering, and characterization routinely require equipment and capabilities using new technologies and processes. Current and future activities calling for these new and advanced capabilities include projects supporting the following areas: Air Vehicles, Propulsion and Power, Avionics, Human Systems, Aircraft Landing Recovery Equipment, Warfare Analysis and Integration, Research and Intelligence, Integrated systems, Experimentation and Test, Integrated Battlespace Simulation and Test. 2. The new Quality Control/Test equipment will enable NAWC to meet customer's expectations, improve in operational efficiencies, and provide new state-of-the-art technology to increase NAWC's customer support for all mission efforts. 3. Economic analysis were developed and included with individual project submissions. 4. Cost avoidance for the equipment in this capability will begin upon project completion. 5. If investment is not made, NAWC would be limited in our ability to increase our capabilities in support of aircraft carriers, networks, sensors, weapons, platforms and have a significant negative result on the success, efficiency and war fighting effectiveness of the Navy. This will also decrease innovative affordable technologies to the Fleet which support our nation's defense strategy and goals and reduce overall Naval war fighting effectiveness.									

PROJECTS ABOVE \$1M:

FY 2016

Jet Car Track Site (JCTS) Infrastructure Upgrade

This project supports the Aircraft Launch and Recovery Equipment (ALRE) test site mission at Lakehurst which is critical to direct fleet support. The tracks are used for certifications and simulations on track sites for simulated landings, live aircraft and evaluating the arresting gear performance in support of aircraft launch and recovery high energy testing. This project will upgrade the JCTS at Lakehurst to fleet representative configuration to allow for fleet representative testing of MK 7 MOD engine and 3/4 Arresting Gear (A/G) configuration. Alternatives have been considered, but replacement is the most cost effective for the government.

Anti-Armor Surveillance and Target Acquisition Radar (ASTARS) Radar

NAWCAD

current radar is old and technologically obsolete. This project will procure a new radar to allow for continued radar mission testing. Alternatives have been considered, but replacement is the most cost effective for the government.

Instrument Control Landing System (ICLS)

NAWCAD supports developmental testing of air traffic control and landing systems of fleet aircraft equipment. This project will procure the current fleet version of the Instrument Control Landing System radar that will provide the capability for full system testing of shipboard equipment prior to installonships to be able to support customers in a more timely and cost effective manner. Alternatives have been considered, but replacement is the most cost effective for the government.

Additive Manufacturing Initiative

This investment will provide for state-of-the-art Additive Manufacturing (AM) technology yielding fully functional metallic and hybrid components which will be applied to NAVAIR projects in support of research, development, test, and in-service fleet support requirements, to include several Strategic Thrust areas. Additionally, the proposed capability will increase responsiveness without increasing labor (personnel), allowing for rapid creation of product for the warfighter in response to emerging requirements. Specifically, this proposed investment will consist of a Selective Laser Sintering (SLS) machine capable of creating metallic product direct from the digital model of that product. Metallic powder will be selectively laser sintered to meet product profile requirements using a variety of common engineering metals (titanium, aluminum, and stainless steel in a variety of grades and chemistries).

Nanoenergetics Synthesis, Formulation, and Characterization

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_P302-ARL

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.

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, but replacement is the most cost effective 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, but replacement is the most cost effective for the government.

NANOENERGETICS ADDITIVE MANUFACTURING

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. Importantly, nanoenergetics and additive manufacturing platforms each enable the use of the other. In the first phase of this effort we are looking to acquire capabilities and equipment to accurately characterize materials throughout the lifecycle, from the synthesis of nanoscale individual ingredients to a printed energetic formulation as well as process and formulate with nanoenergetic materials and develop new precursors, inks and materials for various additive manufacturing platforms.

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.

PROJECTS ABOVE \$1M:

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 balance) that will support the wind test capability used for RDT&E of aircraft. Alternatives have been considered, but replacement is the most cost effective for the government.

Computed Tomography (CT) X-Ray NDI

This project will procure a new piece of equipment that will provide 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, but replacement is the most cost effective for the government.

Distributed EW Capability

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. Importantly, nanoenergetics and additive manufacturing platforms each enable the use of the other. In the first phase of this effort we are looking to acquire capabilities and equipment to accurately characterize materials throughout the lifecycle, from the synthesis of nanoscale individual ingredients to a printed energetic formulation as well as process and formulate with nanoenergetic materials and develop new precursors, inks and materials for various additive manufacturing platforms.

High Speed Core Network

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. Importantly, nanoenergetics and additive manufacturing platforms each enable the use of the other. In the first phase of this effort we are looking to acquire capabilities and equipment to accurately characterize materials throughout the lifecycle, from the synthesis of nanoscale individual ingredients to a printed energetic formulation as well as process and formulate with nanoenergetic materials and develop new precursors, inks and materials for various additive manufacturing platforms.

FOTS_33-CLPL

.This will build on current, albeit limited capabilities at NAWCWD China Lake where recent investments have established a nanoenergetics lab and an energetic ink lab in 474000D as well as replace aging equipment essential to the synthesis and characterization of nanomaterials. The necessary tools and equipment infrastructure for each of these capabilities is briefly detailed as follows. Characterization equipment such as goniometer and tensiometer to better measure surface tension effects is needed. In addition, a more modern DLS could save significant analysis time while provide more reliable results on the size and distribution of the nanomaterial being produced.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2017 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$27.086	\$29.611	\$2.525	
			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	\$17.851	\$20.383	\$2.532	FY16 Actuals
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$1.965	\$1.965	\$0.000	
			Support Equipment	\$7.270	\$7.263	-\$0.007	FY16 Actuals
	2	ADP		\$8.717	\$9.347	\$0.630	
			Computer Hardware (Production)	\$2.834	\$2.578	-\$0.256	FY16 Actuals
			Computer Hardware (Network)	\$4.597	\$5.483	\$0.886	FY16 Actuals
			Computer Software (Operating)	\$0.650	\$0.650	\$0.000	FY16 Actuals
			Telecommunications	\$0.000	\$0.000	\$0.000	
			Other Support Equipment	\$0.636	\$0.636	\$0.000	FY16 Actuals
	3	Software		\$0.255	\$0.510	\$0.255	
			Internally Developed	\$0.000	\$0.000	\$0.000	
			Externally Developed	\$0.255	\$0.510	\$0.255	FY16 Actuals
	4	Minor Construction		\$11.492	\$5.974	-\$5.518	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$11.492	\$5.974	-\$5.518	FY16 Actuals
			Environmental Capability	\$0.000	\$0.000	\$0.000	
			New Mission	\$0.000	\$0.000	\$0.000	
TOTAL FY 2016 CIP Program				\$47.550	\$45.442	-\$2.108	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$27.322	\$22.091	-\$5.231	
			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	\$18.059	\$11.300	-\$6.759	Updated based on program review/current mission requirements.
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$9.263	\$10.791	\$1.528	Updated based on program review/current mission requirements.
	2	ADP		\$5.712	\$6.222	\$0.510	
			Computer Hardware (Production)	\$2.059	\$2.315	\$0.256	Updated based on program review/current mission requirements.
			Computer Hardware (Network)	\$2.757	\$3.011	\$0.254	Updated based on program review/current mission requirements.
			Computer Software (Operating)	\$0.490	\$0.490	\$0.000	
			Telecommunications	\$0.406	\$0.406	\$0.000	
			Other Support Equipment	\$0.000	\$0.000	\$0.000	
	3	Software		\$3.882	\$3.257	-\$0.625	
			Internally Developed	\$0.000	\$0.000	\$0.000	
			Externally Developed	\$3.882	\$3.257	-\$0.625	Updated based on program review/current mission requirements.
	4	Minor Construction		\$10.634	\$22.690	\$12.056	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$10.634	\$22.690	\$12.156	Updated based on program review/current mission requirements.
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2017 CIP Program				\$47.550	\$54.260	\$6.710	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$0.000	\$27.811	\$27.811	
			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	\$14.400	\$14.400	New program year added to budget
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$13.411	\$13.411	New program year added to budget
	2	ADP		\$0.000	\$7.170	\$7.170	
			Computer Hardware (Production)	\$0.000	\$1.724	\$1.724	New program year added to budget
			Computer Hardware (Network)	\$0.000	\$4.846	\$4.846	New program year added to budget
			Computer Software (Operating)	\$0.000	\$0.600	\$0.600	
			Telecommunications	\$0.000	\$0.000	\$0.000	
			Other Support Equipment	\$0.000	\$0.000	\$0.000	
	3	Software		\$0.000	\$3.242	\$3.242	
			Internally Developed	\$0.000	\$0.000	\$0.000	
			Externally Developed	\$0.000	\$3.242	\$3.242	New program year added to budget
	4	Minor Construction		\$0.000	\$9.327	\$9.327	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$0.000	\$9.327	\$9.327	New program year added to budget
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2018 CIP Program				\$0.000	\$47.550	\$47.550	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL AIR WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
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Part 1			
1. Net Carry-In	2,454.1	2,332.8	2,201.4
2. Revenue	4,562.4	4,628.3	4,712.8
3. New Orders	4,441.1	4,496.8	4,601.9
4. Exclusions:			
Foreign Military Sales	238.6	187.2	220.2
Base Realignment and Closure	-	-	-
Other Federal Department and Agencies	51.7	31.7	50.3
Non-Federal and Others	25.8	16.7	18.2
Institutional Major Range & Test Facility Base	297.4	272.0	302.6
OUSD(C) Approved Carryover Waiver	-	-	-
5. Orders for Carryover Calculation	3,827.7	3,989.2	4,010.6
6. Weighted Average Outlay Rate	49.2%	53.8%	53.8%
7. Carryover Rate	50.8%	46.2%	46.2%
8. Allowable Carryover	2,731.1	2,323.6	2,317.5
Allowable Carryover(First Year)	2,158.8	1,990.6	1,949.1
Allowable Carryover (Second Year Procurement-funded Orders)	572.3	333.0	368.4
Part II			
9. Balance of Customer Order at Year End	2,332.8	2,201.4	2,090.5
10. Work-in-progress	-	-	-
11. Exclusions:			
Foreign Military Sales	217.4	219.6	199.7
Base Realignment and Closure	0.1	0.1	0.1
Other Federal Department and Agencies	43.4	30.4	31.7
Non-Federal and Others	27.0	21.8	20.3
Institutional Major Range & Test Facility Base	138.8	132.1	118.2
OUSD(C) Approved Carryover Waiver	-	-	-
12. Calculated Actuals Carryover	1,906.1	1,797.4	1,720.5

Some totals may not add due to rounding.

EXWC,NSWC,NUWC,NAWC DIV,SPAWAR,NRL use RD TEN rates.

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4. Naval Surface Warfare Center

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NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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 2017 President's Budget:

The FY 2017 budget estimate has been updated to reflect the actual civilian pay raise, an increase in direct labor hours associated with anticipated workload, and revised general inflation estimates to include fuel.

The FY 2018 budget estimate includes general inflation, a civilian pay raise, increased facility sustainment and additional overhead expenses related to implementation of Section 212 of the 2017 National Defense Authorization Act (NDAA). This budget request also includes an increase in civilian end strength to ensure the civilian workforce matches projected workload.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Financial Profile:

<u>Orders/Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$4,139.3	\$4,237.8	\$4,256.7
Revenue	\$4,116.3	\$4,237.8	\$4,256.6
Expense	<u>\$4,073.9</u>	<u>\$4,192.1</u>	<u>\$4,316.4</u>
Operating Results	\$42.5	\$45.7	(\$59.8)
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	\$42.5	\$45.7	(\$59.8)
Other Changes Affecting AOR	\$0.3	(\$0.1)	\$0.0
Accumulated Operating Results (AOR)	<u>\$14.2</u>	<u>\$59.9</u>	<u>\$0.1</u>

Some totals may not add due to rounding.

Revenue and Expense: Estimated orders are based on historical trends and inflationary changes. Increases in expenses are driven by inflationary changes along with an increase in overhead related to Section 212 of 2017 NDAA. Revenue is set to achieve zero AOR in FY2018.

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$4,073.2	\$4,237.8	\$4,256.6
Disbursements	<u>\$4,066.1</u>	<u>\$4,190.0</u>	<u>\$4,313.6</u>
Net Outlays	<u>(\$7.1)</u>	<u>(\$47.8)</u>	<u>\$57.0</u>

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:

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	24,978	24,180	24,180

Direct Labor Hours: The workforce continues to be sized in accordance with funded workload. This budget submission includes on-site contractor DLHs associated with a pilot at Indian Head EOD Technology Division (FY 2016: 28.2K Hours, FY 2017: 77.0K Hours, FY 2018: 77.0K Hours).

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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.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$2,568.2	\$2,554.1	\$2,608.1
Workload (DLHs) (000)	24,978	24,180	24,130
Unit cost (per DLH)	\$102.82	\$105.63	\$108.09

Unit Cost is an expense rate 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.

<u>Stabilized / Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$100.21	\$104.70	\$105.74
Change from Prior Year		4.48%	1.00%
Composite Rate Change		3.22%	1.43%

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. The composite rate change in FY 2018 reflects adjustments in direct workload and pricing changes.

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Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	18,211	17,685	17,905
Civilian Workyears (straight time)	17,327	17,135	17,355
Military End Strength	204	188	190
Military Workyears	198	190	189

Civilian Personnel: The civilian resource estimates are a baseline projection of civilian resources necessary to fulfill programming objectives 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.

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$13.8	\$8.8	\$7.3
Equipment, ADPE / Telecom	\$10.4	\$12.0	\$10.1
Software Development	\$0.5	\$0.0	\$0.6
Minor Construction	<u>\$8.7</u>	<u>\$34.2</u>	<u>\$23.8</u>
Total	<u>\$33.3</u>	<u>\$55.0</u>	<u>\$41.8</u>

Some totals may not add due to rounding.

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.

NARRATIVE
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<u>Carryover Compliance (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$1,924.3	\$1,947.2	\$1,947.2
Allowable Carryover	\$2,371.8	\$2,089.6	\$2,131.5
Calculated Actual Carryover	\$1,598.2	\$1,610.2	\$1,622.5
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling	(\$773.6)	(\$479.4)	(\$509.0)

Some totals may not add due to rounding.

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

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REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Revenue:			
Gross Sales			
Operations	4,089.1	4,196.7	4,214.7
Capital Surcharges	-	-	-
Capital Investment Recovery	27.3	41.1	41.8
Other Income			
Total Income	4,116.3	4,237.8	4,256.6
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	15.4	14.5	14.5
Civilian Personnel Compensation & Benefits	2,397.7	2,400.8	2,477.8
Travel and Transportation of Personnel	115.1	128.7	131.1
Material & Supplies (Internal Operations)	222.1	249.1	253.9
Equipment	25.5	103.3	105.2
Other Purchases from NWCF	185.0	105.9	112.7
Transportation of Things	12.0	6.6	6.6
Capital Investment Recovery	27.3	41.1	41.8
Printing and Reproduction	0.3	2.3	2.3
Advisory and Assistance Services	-	-	-
Rent, Communication, Utilities & Misc Charges	72.4	72.5	66.0
Other Purchased Services	1,001.6	1,067.4	1,104.2
Total Expenses	4,074.4	4,192.1	4,316.4
Work in Process Adjustment	-	-	-
Comp Work for Activity Retention Adjustment	(0.5)	-	-
Cost of Goods Sold	4,073.9	4,192.1	4,316.4
Operating Result	42.5	45.7	(59.8)
Adjustments Affecting NOR	0.3	-	-
Capital Surcharges	-	-	-
Extraordinary Expenses Unmatched	-	-	-
Other Changes Affecting NOR (All Others)	0.3	-	-
Net Operating Result	42.5	45.7	(59.8)
PY AOR	(28.6)	14.2	59.9
TOTAL AOR	14.2	60.0	-
Non-Recoverable Adjustments impacting AOR	-	(0.1)	-
AOR for budget purposes	14.2	59.9	-

*Non-Recoverable AOR Adjustment is the cost savings associated with the October 1, 2016 fuel price reduction from \$105.00 to \$94.52.
reduction from \$105.00 to \$94.52. Dispensation of these gains is dependent on the final enacted general
provision contained in the FY2017 appropriations bill.

Exhibit Fund-14 Revenue and Expenses

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

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	4,139.3	4,237.8	4,256.7
a. Orders from DoD Components:	3,559.7	3,721.3	3,736.6
Department of the Navy	3,047.4	3,190.1	3,201.0
O & M, Navy	997.9	966.1	970.1
O & M, Marine Corps	66.1	56.5	56.9
O & M, Navy Reserve	1.0	1.2	1.2
O & M, Marine Corp Reserve	1.7	0.6	0.6
Aircraft Procurement, Navy	76.9	85.6	86.5
Weapons Procurement, Navy	93.2	103.7	105.4
Ammunition Procurement, Navy/MC	62.1	94.1	96.4
Shipbuilding & Conversion, Navy	313.4	372.8	371.4
Other Procurement, Navy	406.1	457.2	456.7
Procurement, Marine Corps	30.9	28.1	28.5
Family Housing, Navy/MC	-	-	-
Research, Dev., Test, & Eval., Navy	987.7	1,012.9	1,016.0
Military Construction, Navy	0.2	0.2	0.2
National Defense Sealift Fund	10.5	10.8	10.8
Other Navy Appropriations	-	0.3	0.3
Other Marine Corps Appropriations	-	-	-
Department of the Army	63.9	104.2	106.5
Army Operation & Maintenance	17.6	27.6	28.0
Army Res, Dev, Test, Eval	27.4	28.1	28.5
Army Procurement	13.3	32.2	33.1
Army Other	5.6	16.3	16.9
Department of the Air Force	78.5	68.8	69.8
Air Force Operation & Maintenance	30.7	17.9	18.3
Air Force Res, Dev, Test, Eval	23.9	31.6	31.7
Air Force Procurement	23.8	19.4	19.8
Air Force Other	-	-	-
DOD Appropriation Accounts	369.9	358.2	359.2
Base Closure & Realignment	0.1	-	-
Operation & Maintenance Accounts	74.7	70.0	70.6
Res, Dev, Test & Eval Accounts	229.4	234.2	234.4
Procurement Accounts	57.9	50.9	51.1
Defense Emergency Relief Fund	-	-	-
DOD Other	8.0	3.1	3.2
b. Orders from other Fund Activity Groups	343.3	316.6	318.6
c. Total DoD	3,903.0	4,037.9	4,055.2
d. Other Orders:	236.3	199.9	201.4
Other Federal Agencies	71.3	51.3	51.6
Foreign Military Sales	147.6	108.4	108.8
Non Federal Agencies	17.4	40.2	41.1
2. Carry-In Orders	1,924.3	1,947.2	1,947.2
3. Total Gross Orders	6,063.6	6,185.1	6,203.9
a. Funded Carry-Over before Exclusions	1,947.2	1,947.2	1,947.3
4. Revenue(-)	4,116.3	4,237.8	4,256.6
5. End of Year Work-In-Process (-)	-	-	-
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	349.1	337.0	324.8
7. Funded Carryover	1,598.2	1,610.2	1,622.5

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
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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(DOLLARS IN MILLIONS)

	<u>Costs</u>
FY 2016 Estimated Actuals	4,073.9
FY 2017 President's Budget:	4,198.8
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	251.0
Pricing Adjustments:	8.2
Civilian Personnel	8.3
Fuel Price	-0.1
Program Changes:	-266.0
Decreased Direct Non-Labor	-266.0
Other Changes:	0.0
Depreciation	0.0
Facilities Sustainment, Restoration & Modernization	0.0
Other (list)	0.0
FY 2017 Current Estimate:	4,192.1

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

	<u>Costs</u>
FY 2017 Current Estimate:	4,192.1
Pricing Adjustments:	67.5
Annualization of Prior Year Pay Raises	9.6
Civilian Personnel	9.6
Military Personnel	0.1
FY 2018 Pay Raise	28.9
Civilian Personnel	28.7
Military Personnel	0.2
Fuel Price Changes	0.0
General Purchase Inflation	29.0
Other Price Changes	0.0
Working Capital Fund Price Changes	0.0
Program Changes:	52.3
Increase Section 212 2017 NDAA	44.7
Increase from DLA Distribution Price Equitability	3.3
Increase Direct Non-Labor	4.3
Other Changes:	4.5
Depreciation	0.7
Facilities Sustainment, Restoration & Modernization	3.8
FY 2018 Estimate:	4,316.4

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	24	\$13.819	24	\$8.799	12	\$7.312
	- Vehicles	0	\$0.000	0	\$0.000	0	\$0.000
	- Material Handling	3	\$2.719	0	\$0.000	0	\$0.000
	- Installation Security	0	\$0.000	0	\$0.000	0	\$0.000
	- Quality Control/Testing	12	\$4.524	11	\$3.997	7	\$4.516
	- Medical Equipment	0	\$0.000	0	\$0.000	0	\$0.000
	- Machinery	2	\$0.426	6	\$1.424	0	\$0.000
	- Support Equipment	7	\$6.150	7	\$3.378	5	\$2.796
2	ADPE and Telecom Equipment >= \$.250M	21	\$10.355	27	\$12.016	13	\$10.124
	- Computer Hardware (Production)	9	\$4.033	10	\$5.778	5	\$3.337
	- Computer Hardware (Network)	11	\$5.329	16	\$6.236	6	\$5.287
	- Computer Software (Operating)	0	\$0.000	0	\$0.000	0	\$0.000
	- Telecommunications	1	\$0.993	1	\$0.002	2	\$1.500
	- Other Support Equipment	0	\$0.000	0	\$0.000	0	\$0.000
3	Software Development >= \$.250M	1	\$0.495	0	\$0.000	1	\$0.600
	- Internally Developed	1	\$0.495	0	\$0.000	1	\$0.600
	- Externally Developed	0	\$0.000	0	\$0.000	0	\$0.000
4	Minor Construction (>= \$.250M and <= \$1.000M)	20	\$8.663	35	\$34.203	8	\$23.794
	- Replacement Capability	8	\$0.507	14	\$18.016	4	\$5.824
	- New Construction	12	\$8.156	21	\$16.187	4	\$17.970
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	Grand Total	66	\$33.332	86	\$55.018	34	\$41.830
	Total Capital Outlays		\$34.618		\$39.030		\$39.030
	Total Depreciation Expense		\$27.275		\$41.090		\$41.835

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development	#001 - Non-ADP Equipment						Naval Surface Warfare Center		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Material Handling	3	\$0.906	\$2.719	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Installation Security	0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Quality Control/ Testing	12	\$0.377	\$4.524	11	\$0.363	\$3.997	7	\$0.645	\$4.516
Medical Equipment	0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Machinery	2	\$0.213	\$0.426	6	\$0.237	\$1.424	0	\$0.000	\$0.000
Support Equipment	7	\$0.879	\$6.150	7	\$0.483	\$3.378	5	\$0.559	\$2.796
Total	24	\$0.576	\$13.819	24	\$0.367	\$8.799	12	\$0.609	\$7.312

Justification:

Machinery These Non-ADPE equipment investments support mission essential research, development, test and evaluation initiatives. Equipment procurements will support initiatives such as: - Advanced ballistics systems - Next Generation Training & Simulation Systems
- New Shipboard technologies - Hypervelocity penetrating weapons and kinetic energy weapons - High performance tactical computing systems
Benefit: These provide research and development equipment to support new mission areas or new test and evaluation techniques to enhance the overall effectiveness of the warfare center mission. Investments categorized as machinery provide enabling technology insertion, and machinery integration into new acquisition programs and the deployment of machinery initiatives into the fleet. Impact: These investments support the Navy's Maritime strategy for maintaining readiness and building a relevant and future force for surface ships and their systems. Investments provide for new mission research and development equipment essential to the test and evaluation of emerging ship-board technologies.

Material Handling Equipment: These Non-ADPE equipment investments support mission essential research, development, test and evaluation initiatives. Equipment procurements will support initiatives such as: - Advanced ballistics systems - Next Generation Training & Simulation Systems
- New Shipboard technologies - Hypervelocity penetrating weapons and kinetic energy weapons - High performance tactical computing systems
Benefit: These provide research and development equipment to support new mission areas or new test and evaluation techniques to enhance the overall effectiveness of the warfare center mission. Investments categorized as Material Handling include installed, portable, mobile or self propelled devices designed to move or pick-up component parts and materials used on Navy shipboard systems. Impact: These investments support the Navy's Maritime strategy for maintaining readiness and building a relevant and future force for surface ships and their systems. Investments provide for handling/transport equipment essential to the test and

Quality Control/Testing Equipment: These investments provide capital equipment required to ensure that the development and/or maintenance methodology and standards used for quality control/assurance and testing of ship systems are adequate to meet Navy requirements. This is accomplished through diagnostic analysis, fault identification, testing and calibration for ship components. Products typically include electronic modules, circuit cards, power supplies, displays, assemblies and sub-assemblies of shipboard machinery and components. This equipment provides support for the development, production, and servicing of Navy weapon and combat systems.

Benefit: Quality Control/Assurance and Testing investments provide the Navy reliable processes and procedures to ensure technical specifications and functional requirements meet developed product/service standards. The identification of unit failures and poor service results in corrective action designed to improve the production or service process being measured to achieve the desired mission results.

Impact: These investments support the Navy's Maritime strategy for surface ships and their systems. Investments provide for quality control/assurance and test results that are accurate and emulate shipboard environments eliminating the need to schedule ship board testing and speeding the retest of ships systems.

Economic Analysis: There is 1 project equal to or greater than \$1000K. An economic analysis was performed on all individual projects greater than the DOD capitalization threshold. All non-ADPE Quality Control/Testing projects have an estimated useful life of 10 years and an average payback period of 3.5 to 6 years.

Extrusion Plant Cabinet X-ray System (\$1.54M): FY18 project. The existing cabinet x-ray system has been in service in the Extrusion Plant since 1989. It is the only system on station capable of performing real time radiographic inspection of propellant grains and motors. Due to program requirements for system qualification, achieve 2-1T sensitivity during continuous 360° rotation, the versatility of the system is limited. The current system cannot be configured for one program then switched to a different program without requiring requalification. Requalification is a time consuming and expensive process. A new system would be capable of having interchangeable components which would require only relatively minor image quality verification when switched from program to program.

Support Equipment: Non-ADPE support equipment investments support mission essential research, development, test and evaluation of equipment that is unsafe, beyond economical repair, technically obsolete, or otherwise unusable. Equipment supports Warfare Center Core Equities including ship/ship systems, ship weapon systems, ship combat systems, ordnance, and littoral combat systems. Equipment supporting this mission includes explosive detection equipment, ship hull test equipment, and test and evaluation equipment for various surface ship systems.

Benefit: Mission essential research and development equipment must operate at optimal efficiency to achieve proper test and evaluation results. Equipment is replaced with modern reliable equipment to support the research and development mission of the Naval Warfare Centers.

Impact of not Funding: The Naval Surface Warfare Center activities are responsible for new product testing as well as system In-Service-Engineering. The ability of the Surface Warfare Centers to provide mission essential research and development for new systems require mission essential investments for replacement of equipment will not be made resulting in work that produces obsolete results to the scientific community, economically inefficient operation, and possible risk to human life.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development	#002 - ADP Equipment						Naval Surface Warfare Center		
	FY 2016			FY 2017			FY 2018		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	9	\$0.448	\$4.033	10	\$0.578	\$5.778	5	\$0.667	\$3.337
Computer Hardware (Network)	11	\$0.484	\$5.329	16	\$0.390	\$6.236	6	\$0.881	\$5.287
Computer Software (Operating System)	0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Telecommunications	1	\$0.993	\$0.993	1	\$0.002	\$0.002	2	\$0.750	\$1.500
Other Support Equipment	0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Total	21	\$0.493	\$10.355	27	\$0.445	\$12.016	13	\$0.779	\$10.124
Justification: <u>ADP Equipment Computer Hardware (Production):</u> These investments will support the acquisition of automated data processing and telecommunications equipment for the surface ship research and development community. Funds will provide networks/connectivity to all Naval Warfare Center activities and procurement of hardware for mission essential research and development computing needs and centralized system hosting including: Business System Replacement, High Speed Computing, and Research, Development, Benefit: The projected benefits include technology tools for the research and development community and continuity of operations for standard business systems throughout the Warfare Center. Impact: ADP Equipment supporting the research and development community must remain on the cutting edge of technology to conduct complex simulations, harness advanced data analytics & machine learning capabilities, perform predictive analysis, and analyze surface ship 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. To ensure continuity of business operations, new hardware platforms must be operational. Test, and Evaluation Networks. Investments will include routers, servers, firewalls, etc. <u>ADP Equipment Computer Hardware (Network):</u> These investments will support the acquisition of automated data processing and telecommunications equipment for the surface ship research and development community. Funds will provide networks/connectivity to all Naval Warfare Center activities and procurement of hardware for mission essential research and development computing needs and centralized system hosting including: Business System Replacement, High Speed Computing, and Research, Development, Test, and Evaluation Networks. Investments will include routers, servers, firewalls, etc.. Benefit: The projected benefits include technology tools for the research and development community and continuity of operations for standard business systems throughout the Warfare Center. Impact: ADP Equipment supporting the research and development community must remain on the cutting edge of technology for to conduct complex simulations, harness advanced data analytics & machine learning capabilities, perform predictive analysis, and analyze surface ship 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. To ensure continuity of business operations, new hardware platforms must be operational.									

Cyber Security Ice Lab(\$1.17M): FY17 project will provide a robust, centralized cyber security test and evaluation environment (up to TS classification) to test and verify cyber security throughout the acquisition life cycle and DOT&E's new emphasis on operational cyber testing. The Cyber ICE Lab will provide programs of record capability to conduct realistic and timely developmental testing enabling achievement of operational testing objectives.

Research, Development, Test & Evaluation Classified Network Infrastructure Upgrade – Network Gear Upgrades (\$1.2M): FY17 project will upgrade and enhance the current (classified) Secure Research, Development, Test &Evaluation (SRDT&E) Network Switches and Routers. This will dramatically improve network performance by increasing bandwidth from 1GB to a minimum of 10GB throughput on all network devices.

Concept Exploration and Technology Assessment (CETA) Laboratory (\$1.1M): FY17 project for a CETA laboratory is a full virtual environment addressing existing challenges in Combat System Development by assessing technology maturity, producing validated requirements based on fleet needs, and collecting quantifiable metrics demonstrating improved capability. The laboratory provides a venue for technology insertion into a Weapons/Combat system without impact on real systems.

Research, Development, Test & Evaluation Classified Network Infrastructure Upgrade Phase 2 - TACLane Upgrades (\$2.5M): FY18 project will upgrade and enhance the current (classified) Secure Research, Development, Test &Evaluation (SRDT&E) Network encryption devices (TACLanes). This project is the 2nd phase of the FY17 Project by the same name. Completion of this phase is necessary to complete the upgrade. This will dramatically improve network performance by increasing bandwidth from 1GB to a minimum of 10GB throughput on all network devices.

National Unmanned Systems Shared Resource Center (NUSSRC) (\$1.1M): FY17 Project. Bluefin 9 unmanned underwater vehicle (UUV) to improve availability and stave off obsolescence issues within the National Unmanned Systems Shared Resource Center (NUSSRC).

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)				MAY 2017						
Department of the Navy/ Research and Development		#003 - Software Development					Naval Surface Warfare Center			
		FY 2016			FY 2017			FY 2018		
Software		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed		1	\$0.495	\$0.495	0	\$0.000	\$0.000	1	\$0.600	\$0.600
Externally Developed		0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Total		1	\$0.495	\$0.495	0	\$0.000	\$0.000	1	\$0.600	\$0.600
Justification:										
<u>Software Projects < \$1.000M:</u> Software projects in this budget support predictive maintenance capability, and modular integration for Fleet electronics systems. This capability would develop an onboard ship system that could be used to predict and monitor electronic systems. In addition, the development of a Maritime Electronic Warfare Modeling and Simulation tool will allow the test community to analyze performance and interoperatbility from weapon system to battle force levels. The useful life of these investments average 5 years, with a payback of 2.5 - 3.5 years.										
Benefits: These investments will directly support the transformation of the Warfare Centers to become a more agile support organization. By fully integrating authoritative data sources with collaborative tools, flexible display technologies, and robust content management we will be better able to support the Fleet's war fighters--from Force Level leadership, to the sailor on the deck plate -at any location and from any location. This evolution of Distance Support capability also enables us to be more proactive in developing life-cycle solutions by making the information required readily available at the workers desktop. All development will provide the collaborative structure which will contribute to achieving current / planned customer service levels.										

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development		#004 - Minor Construction (\$250K - \$1 M)					Naval Surface Warfare Center		
Minor Construction	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	8	\$0.063	\$0.507	14	\$1.287	\$18.016	4	\$1.456	\$5.824
New Construction	12	\$0.680	\$8.156	21	\$0.771	\$16.187	4	\$4.493	\$17.970
Environmental Capability	0	\$0.000	\$0.000	0	\$0.000	\$0.000	0	\$0.000	\$0.000
Total	20	\$0.433	\$8.663	35	\$0.977	\$34.203	8	\$2.974	\$23.794

Justification:

New Construction: 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 (MCON) projects meet the DOD capitalization criteria, however, 12 MCON projects exceed the threshold specified by 10 USC 2805. The below MCON projects utilize Sec. 2804 of the FY08 National Defense Authorization Act (NDAA) authority for the Lab Revitalization Demonstration Program (LRP) 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 Analysis: An economic analysis was performed on all individual projects greater than the DOD capitalization threshold.

FY 2016

High Energy Laser Integration Facility (\$1.3M): FY16 LDP construction of a high energy laser integration high bay facility with access road and test pad to support HEL weapon system development and direct testing on the Potomac River Test Range.

Craft Integration Production Facility (\$2M): FY16 LDP construction of a facility for technology development, hardware and software integration, production, acceptance testing, staging, deliver, fleet support and repair of Expeditionary Systems projects.

FY2017

O&MS Warehouse (\$2.526M): FY17 LDP This project constructs a critical centralized warehousing facility to meet OM&S (Operating Materials & Supplies) storage requirements in close proximity to the primary RDT&E lab. No other alternative is available for relocation, renovation or lease.

New Construction (Continued)

FY2017 (Continued)

Aegis Computer Infrastructure Lab (\$4M): FY17 LDP construction project to modernize and expand existing lab space to provide secure lab space for operations and analysis of onboard computer systems.

Electromagnetic Maneuver Warfare (EMW) Facility (\$3.9M): FY17 LDP project constructs approximately 10,000 SF controlled access facility to accommodate approximately 60 personnel to support Real Time Spectrum Operations (RTSO) program and other EMW work. RTSO has been approved to become a Program of Record (POR) and selected by the CNO to receive funding as a Speed-to-Fleet (S2F) initiative, a program which rapidly transitions prototype technology to the fleet.

Advanced Weapons Handling Technology Facility (\$2.7M): FY17 LDP project constructs a new facility that provides a platform to assess, improve, validate, troubleshoot and resolve complex problems for various vertical shipboard weapons handling systems.

FY2018

Waterfront Operations Support Facility (\$4M): FY18 LDP project constructs the first phase of a waterfront operations support facility allowing for expansion of Fleet driven pier-side readiness and sustainment programs. This investment also begins to provide the opportunity for the co-location of several NAVSEA Warfare Center Division offices which will foster collaboration and operational efficiencies.

Cyber Warfare Engineering Lab (\$3.8M): FY18 LDP project constructs a Cyber Warfare Engineering Complex consisting of Secret/TS/SCI level cyber warfare engineering labs, infrastructure and associated security, and provides space for approximately 30 people. The facility, planned as an expansion to the tactical labs, shall have construction standards which will provide SCIF ready space. It shall be able to host live, virtual & constructive cyber warfare labs that facilitate the development, building, testing, accrediting, fielding and sustainment of cyber resilient systems.

Joint Logistic Operation Center (\$2.8M): FY18 LDP project constructs a new Naval Sea Logistics Center (NSLC) operations building, which will be co-located with the funded OM&S warehouse. These buildings will centralize logistics, supply and warehouse operations that directly support mission requirements, support Financial Improvement and Audit Readiness (FIAR), and comply with WARCEN Warehouse Management requirements. The project will also free up ~8,300 ft² of building space to support current and planned range and data systems integration laboratory customer tasking.

Bangor RDT&E Lab Expansion (\$2.5M): FY18 LDP project constructs the Bangor RDT&E Lab expansion to provide increased fleet support for advanced submarine signature measurement technology and development. The expansion will allow the facilities and infrastructure improvements necessary to accommodate current and future support of new fleet requirements.

Advanced Energetics Complex Phase IIIB (\$2.1M): FY18 LDP project adds approximately 5280 SF of space to an existing building to accommodate lab test space for combustion research blending and scale-up, propellant development and production support, hazards characterization, and motor dissection.

FY2018 (Continued)

Replacement: 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 and/or safety deficiencies. Minor construction projects include all costs to deliver a complete and usable project. Minor Construction projects meet the DOD capitalization criteria, however, 8 MCON projects do exceed the threshold specified by 10 USC 2805. The below MCON projects utilize Sec. 2804 of the FY08 National Defense Authorization Act (NDAA) authority for the Lab Revitalization Demonstration Program (LRP) 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 Analysis: An economic analysis was performed on all individual projects greater than the DOD capitalization threshold.

FY2016

Advanced System Integration Facility (\$1.9M): FY16 LDP construction project for additional laboratory space for accommodate the growing workload in Advanced System Integration . Renovate approximately 5,000 SF of the first floor north high bay to meet current laboratory standards, including upgrading HVAC and electrical distribution and reconfiguring the existing spaces. Installation of a sprinkler system and communication systems are also included.

FY2017

Light Test Tunnel Modernization (\$2.8M): FY17 LDP construction project relocates the existing light test tunnel capability from Building 2869 to Building 365. The test tunnel itself along with the load room will be established inside Bay 1. The control room and optics/spec lab area will be placed in the Building 365 Annex. Bay 2 will house some support equipment. This move will also include procuring and installing a new baghouse system which will account for ~\$1M of the budget. This project will not utilize all of Bldg 365; the building will have additional space to be utilized by another independent group if needed.

RDT&E Network Efficiency & Safety Re-alignment (\$1.8M): FY17 LDP construction project relocates the RDT&E network into Joint Warfare Assessment Laboratory (JWAL) room 1109, consolidating 19 server racks currently located in room 1201 and one crypto rack in room 1202. The current equipment rack configuration requires environmental control of the existing 3,000 ft2 laboratory spaces and separate emergency shut off valves. The environmentally controlled space reductions and proposed RDT&E network re-alignment reduces total ownership costs, improves data security/integrity, consolidates personnel, and improves 24/7 secure data availability for warfighter testing and training. RDT&E networks provide data for collaborative Test and Evaluation (T&E) and Fleet exercise assessment during Combat System Ship Qualification Trials (CSSQTs), major Strike Group exercises, advanced Missile Defense Agency (MDA) Sea-Based Midcourse Defense (SMD) test programs, and other T&E programs.

Innovation Center (\$1.9M): FY17 LDP project constructs space for an Innovation Center where researchers from different organizations can work on collaborative Science and Technology projects. The space would house a creative and state-of-the-art collaboration space modeled on current best practices in the public and private sector.

Replacement (Continue):

FY 2017 (Continue)

Multi-Sensor Test Pond Capabilities Upgrade (\$2.213M): FY17 LDP This project enables critical repair of Multi-Sensor test pond. This pond currently has leaks which damage the embankment and supports structure. Failure to repair could cause the Multi-Sensor test pond to drain into the bay which would have an environmental impact.

Modernization of Pyrotechnic Chemistry Laboratory Facility (\$1.5M): FY17 LDP Relocation and modernization of explosive laboratory. The Pyrotechnic Chemistry Laboratory will be permanently moved to another building that requires some upgrades and modifications to the utilities (HVAC, humidity control, additional water lines, gas lines, and air compressor), a new drop ceiling and exhaust hoods.

COMSEC/Classified Space Consolidation/Reconfiguration (\$1.275M): FY17 LDP This project consolidates COMSEC operations and reconfigures classified space. By consolidating the COMSEC operations and hardening the secure IT network lines to the upper deck of the building that houses it, project will increase the functionality of the building and create an additional 1200 sf of training support space to meet current requirements. The classified space reconfiguration will also increase sensitive compartmentalized information facility space to enable execution of increased Fleet mission requirements.

FY 2018

Facility Power & Thermal Upgrade (\$1.1M): FY18 LDP Expand testing capabilities of PUPFAC and HEPPTL facilities by upgrading available power & adding thermal management capabilities to be shared between facilities. HEPPTL (B1123) needs available 480 VAC power upgraded from 200A to 600A. This will allow stacks of modules to be tested & facilitate packaging and containerization architectures into possible future shipboard/land based deployment for RF/Laser/Electric Weapons. PUPFAC (B1120) upgrades include new power distribution & thermal management testing circuit enabling component level testing and subsystem optimization for high peak and average power RF sources.

Bldg 38 Advanced System Integration Facility Office Space (\$2.315M): FY18 LDP Renovation of approximately 5,000 SF to meet current laboratory standards, including upgrading HVAC and electrical distribution and reconfiguring the existing spaces. Installation of a sprinkler system and communication systems are also included.

S&T Division Office Space (\$1.8M): FY18 LDP Dedicated office space for the Science & Technology Division. This project creates a dedicated office space for the S&T Division at the warfare center that is optimized for rapid prototyping, idea generation, and brainstorming.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$14.064	\$13.819	-\$0.245	
			Vehicles	\$0.000	\$0.000	\$0.000	
			Material Handling	\$2.986	\$2.719	-\$0.267	FY16 Actuals
			Installation Security	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$6.087	\$4.524	-\$1.563	FY16 Actuals
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.456	\$0.426	-\$0.030	FY16 Actuals
			Support Equipment	\$4.535	\$6.150	\$1.615	FY16 Actuals
2	ADP			\$10.502	\$10.355	-\$0.147	
			Computer Hardware (Production)	\$3.430	\$4.033	\$0.603	FY16 Actuals
			Computer Hardware (Network)	\$6.077	\$5.329	-\$0.748	FY16 Actuals
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$0.995	\$0.993	-\$0.002	FY16 Actuals
			Other Support Equipment	\$0.000	\$0.000	\$0.000	
3	Software			\$0.500	\$0.495	-\$0.005	
			Internally Developed	\$0.500	\$0.495	-\$0.005	FY16 Actuals
			Externally Developed	\$0.000	\$0.000	\$0.000	
4	Minor Construction			\$23.648	\$8.663	-\$14.985	
			Replacement	\$10.534	\$0.507	-\$10.027	FY16 Actuals
			New Construction	\$13.114	\$8.156	-\$4.958	FY16 Actuals
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2016 CIP Program				\$48.714	\$33.332	-\$15.382	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$9.364	\$8.799	-\$0.565	
			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	\$4.396	\$3.997	-\$0.399	Updated based on program review/current mission requirements.
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$1.364	\$1.424	\$0.060	Updated based on program review/current mission requirements.
			Support Equipment	\$3.604	\$3.378	-\$0.226	Updated based on program review/current mission requirements.
	2	ADP		\$9.793	\$12.016	\$2.223	
			Computer Hardware (Production)	\$3.116	\$5.778	\$2.662	Updated based on program review/current mission requirements.
			Computer Hardware (Network)	\$5.577	\$6.236	\$0.659	Updated based on program review/current mission requirements.
			Computer Software (Operating)	\$1.100	\$0.000	-\$1.100	Updated based on program review/current mission requirements.
			Telecommunications	\$0.000	\$0.002	\$0.002	Updated based on program review/current mission requirements.
			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		\$21.933	\$34.203	\$12.270	
			Replacement	\$3.950	\$18.016	\$14.066	Updated based on program review/current mission requirements.
			New Construction	\$17.983	\$16.187	-\$1.796	Updated based on program review/current mission requirements.
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2017 CIP Program				\$41.090	\$55.018	\$13.928	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$7.312	\$7.312	\$0.000	
			Vehicles	\$0.000	\$0.000		
			Material Handling	\$0.000	\$0.000		
			Installation Security	\$0.000	\$0.000		
			Quality Control/Testing	\$4.516	\$4.516		New program year added to budget
			Medical Equipment	\$0.000	\$0.000		
			Machinery	\$0.000	\$0.000		
			Support Equipment	\$2.796	\$2.796		
	2	ADP		\$10.124	\$10.124	\$0.000	
			Computer Hardware (Production)	\$3.337	\$3.337		New program year added to budget
			Computer Hardware (Network)	\$5.287	\$5.287		New program year added to budget
			Computer Software (Operating)	\$0.000	\$0.000		
			Telecommunications	\$1.500	\$1.500		New program year added to budget
			Other Support Equipment	\$0.000	\$0.000		
	3	Software		\$0.600	\$0.600	\$0.000	
			Internally Developed	\$0.600	\$0.600		New program year added to budget
			Externally Developed	\$0.000	\$0.000		
	4	Minor Construction		\$23.794	\$23.794	\$0.000	
			Replacement	\$5.824	\$5.824		New program year added to budget
			New Construction	\$17.970	\$17.970		New program year added to budget
			Environmental Capability	\$0.000	\$0.000		
TOTAL FY 2018 CIP Program				\$41.830	\$41.830	\$0.000	

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CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL SURFACE WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
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Part 1			
1. Net Carry-In	1,924.3	1,947.2	1,947.2
2. Revenue	4,116.3	4,237.8	4,256.6
3. New Orders	4,139.3	4,237.8	4,256.7
4. Exclusions:			
Foreign Military Sales	147.6	108.4	108.8
Base Realignment and Closure	(0.1)	-	-
Other Federal Department and Agencies	71.3	51.3	51.6
Non-Federal and Others	17.4	40.2	41.1
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
5. Orders for Carryover Calculation	3,903.2	4,037.9	4,055.2
6. Weighted Average Outlay Rate	49.2%	53.8%	53.8%
7. Carryover Rate	50.8%	46.2%	46.2%
8. Allowable Carryover	2,371.8	2,089.6	2,131.5
Allowable Carryover(First Year)	1,982.8	1,865.5	1,873.5
Allowable Carryover (Second Year Procurement-funded Orders)	389.0	224.0	257.9
Part II			
9. Balance of Customer Order at Year End	1,947.2	1,947.2	1,947.3
10. Work-in-progress	-	-	-
11. Exclusions:			
Foreign Military Sales	253.7	235.0	215.5
Base Realignment and Closure	0.1	0.1	0.1
Other Federal Department and Agencies	71.3	71.0	70.8
Non-Federal and Others	24.0	30.9	38.3
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
12. Calculated Actuals Carryover	1,598.2	1,610.2	1,622.5

Some totals may not add due to rounding.

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5. Naval Undersea Warfare Center

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NARRATIVE
DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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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 Hawaii, Nanosee British Columbia, and Naval Sea Logistics Center Mechanicsburg Pennsylvania.

Significant Changes Since the FY 2017 President's Budget:

The FY 2017 budget estimate has been updated to reflect the actual civilian pay raise, an increase in direct labor hours associated with anticipated workload, and revised general inflation estimates to include fuel.

The FY 2018 budget estimate includes general inflation, a civilian pay raise, increased facility sustainment and additional overhead expenses related to implementation of Section 212 of the 2017 National Defense Authorization Act (NDAA). This budget request also includes an increase in civilian end strength to ensure the civilian workforce matches projected workload.

NARRATIVE
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NAVY WORKING CAPITAL FUND - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$1,144.4	\$1,221.6	\$1,232.5
Revenue	\$1,105.7	\$1,201.3	\$1,219.1
Expense	<u>\$1,096.1</u>	<u>\$1,198.9</u>	<u>\$1,229.9</u>
Operating Results	\$9.6	\$2.4	(\$10.8)
Capital Surcharge	<u>\$1.8</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	\$5.9	\$2.4	(\$10.8)
Other Changes Affecting AOR	(\$1.9)	\$0.0	\$0.0
Accumulated Operating Results (AOR)	<u>\$8.4</u>	<u>\$10.8</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Revenue and Expenses: Estimated orders are based on historical trends and inflationary changes. Increases in expenses are driven by inflationary changes along with an increase in overhead related to Section 212 of 2017 NDAA. Revenue is set to achieve zero AOR in FY2018.

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>
Collections	<u>\$1,095.2</u>	<u>\$1,200.4</u>	<u>\$1,218.7</u>
Disbursements	<u>\$1,098.4</u>	<u>\$1,196.9</u>	<u>\$1,229.2</u>
Outlays	<u>\$3.2</u>	<u>(\$3.5)</u>	<u>\$10.5</u>

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:

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	6,893	6,777	6,777

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

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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.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$693.2	\$704.9	\$682.8
Workload (DLHs) (000)	6,893	6,777	6,429
Unit cost (per DLH)	\$100.58	\$104.02	\$106.20

Unit Cost is an expense rate 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.

<u>Stabilized / Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$99.69	\$99.63	\$105.02
Change from Prior Year		-0.06%	5.41%
Composite Rate Change		0.91%	3.80%

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. The composite rate change in FY 2018 reflects adjustments to direct workload and pricing changes.

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DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND - NAVAL UNDERSEA WARFARE CENTER
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Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	5,290	5,174	5,189
Civilian Workyears (straight time)	5,025	5,110	5,125
Military End Strength	41	36	36
Military Workyears	29	32	32

Civilian Personnel: The civilian resource estimates are a baseline projection of civilian resources necessary to fulfill programming objectives 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.

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$3.7	\$6.0	\$6.9
Equipment, ADPE / Telecom	\$4.8	\$5.4	\$2.9
Software Development	\$1.2	\$3.6	\$0.8
Minor Construction	<u>\$2.3</u>	<u>\$4.2</u>	<u>\$4.0</u>
Total	<u>\$11.9</u>	<u>\$19.2</u>	<u>\$14.7</u>

Some totals may not add due to rounding.

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.

NARRATIVE
DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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<u>Carryover Compliance (\$Million):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$585.7	\$624.4	\$644.7
Allowable Carryover	\$610.7	\$519.4	\$528.5
Calculated Actual Carryover	\$382.6	\$398.9	\$399.6
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$228.1)	(\$120.5)	(\$129.0)

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 UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	1,092.2	1,186.5	1,204.4
Capital Surcharges	1.8	-	-
Capital Investment Recovery	11.7	14.8	14.7
Other Income			
Total Income	1,105.7	1,201.3	1,219.1
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	2.9	3.1	2.9
Civilian Personnel Compensation & Benefits	675.6	695.2	710.6
Travel and Transportation of Personnel	32.3	29.4	29.8
Material & Supplies (Internal Operations)	61.8	79.3	80.8
Equipment	3.8	3.9	4.0
Other Purchases from NWC	72.8	73.4	75.5
Transportation of Things	3.4	2.0	2.1
Capital Investment Recovery	11.7	14.8	14.7
Printing and Reproduction	1.1	1.1	1.1
Advisory and Assistance Services	-	-	-
Rent, Communication, Utilities & Misc Charges	21.9	20.3	20.7
Other Purchased Services	209.1	276.5	287.6
Total Expenses	1,096.4	1,198.9	1,229.9
Work in Process Adjustment	-	-	-
Comp Work for Activity Retention Adjustment	(0.3)	-	-
Cost of Goods Sold	1,096.1	1,198.9	1,229.9
Operating Result	9.6	2.4	(10.8)
Adjustments Affecting NOR	(3.7)	-	-
Capital Surcharges	(1.8)	-	-
Extraordinary Expenses Unmatched	-	-	-
Other Changes Affecting NOR (All Others)	(1.9)	-	-
Net Operating Result	7.8	2.4	(10.8)
PY AOR	2.5	8.4	10.8
TOTAL AOR	8.4	10.8	-
Non-Recoverable Adjustments impacting AOR	-	-	-
AOR for budget purposes	8.4	10.8	-

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	1,144.4	1,221.6	1,232.5
a. Orders from DoD Components:	922.4	966.9	975.4
Department of the Navy	896.6	941.4	950.7
O & M, Navy	264.9	268.6	272.3
O & M, Marine Corps	1.7	1.5	1.5
O & M, Navy Reserve	0.3	0.5	0.5
O & M, Marine Corp Reserve	0.1	0.0	0.0
Aircraft Procurement, Navy	9.5	12.3	12.3
Weapons Procurement, Navy	68.7	74.1	75.7
Ammunition Procurement, Navy/MC	0.1	-	-
Shipbuilding & Conversion, Navy	84.0	95.9	97.7
Other Procurement, Navy	145.6	153.1	155.2
Procurement, Marine Corps	0.6	1.4	1.4
Family Housing, Navy/MC	-	-	-
Research, Dev., Test, & Eval., Navy	320.3	333.4	333.4
Military Construction, Navy	0.2	-	-
National Defense Sealift Fund	0.6	0.5	0.5
Other Navy Appropriations	-	-	-
Other Marine Corps Appropriations	-	-	-
Department of the Army	2.7	3.8	3.8
Army Operation & Maintenance	0.5	0.9	0.9
Army Res, Dev, Test, Eval	1.9	1.1	1.1
Army Procurement	0.3	1.9	1.9
Army Other	0.0	-	-
Department of the Air Force	2.4	4.2	4.3
Air Force Operation & Maintenance	0.0	1.5	1.5
Air Force Res, Dev, Test, Eval	0.3	0.8	0.8
Air Force Procurement	2.1	1.9	1.9
Air Force Other	-	-	-
DOD Appropriation Accounts	20.8	17.4	16.6
Base Closure & Realignment	-	-	-
Operation & Maintenance Accounts	5.4	1.6	1.6
Res, Dev, Test & Eval Accounts	10.1	14.3	13.5
Procurement Accounts	5.0	1.3	1.3
Defense Emergency Relief Fund	-	-	-
DOD Other	0.2	0.2	0.2
b. Orders from other Fund Activity Groups	80.0	84.9	85.3
c. Total DoD	1,002.4	1,051.8	1,060.8
d. Other Orders:	142.0	169.8	171.7
Other Federal Agencies	5.9	6.8	6.8
Foreign Military Sales	99.1	130.4	131.9
Non Federal Agencies	37.0	32.6	33.1
2. Carry-In Orders	585.7	624.4	644.7
3. Total Gross Orders	1,730.2	1,846.0	1,877.2
a. Funded Carry-Over before Exclusions	624.4	644.7	658.0
4. Revenue(-)	1,105.7	1,201.3	1,219.1
5. End of Year Work-In-Process (-)	-	-	-
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	241.8	245.8	258.5
7. Funded Carryover	382.6	398.9	399.6

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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>Costs</u>
FY 2016 Estimated Actuals	1096.1
FY 2017 President's Budget:	1121.7
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	13.8
Pricing Adjustments:	2.0
Civilian Personnel	2.4
Fuel Price	-0.4
Program Changes:	61.4
Other Changes:	-0.1
Depreciation	-0.4
Facilities Sustainment, Restoration & Modernization	0.3
Other (list)	0.0
FY 2017 Current Estimate:	1198.9

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	1198.9
Pricing Adjustments:	21.1
Annualization of Prior Year Pay Raises	3.2
Civilian Personnel	3.2
Military Personnel	0.0
FY 2018 Pay Raise	8.6
Civilian Personnel	8.6
Military Personnel	0.0
Fuel Price Changes	0.1
General Purchase Inflation	7.9
Other Price Changes	1.4
Working Capital Fund Price Changes	1.4
Program Changes:	9.3
Decreased Direct Non-Labor	-4.2
Section 212 NDAA 2017	11.3
Increased Workload	2.2
Other Changes:	0.5
Depreciation	-0.1
Facilities Sustainment, Restoration & Modernization	0.6
FY 2018 Estimate:	1229.9

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CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	7	\$3.699	12	\$6.013	11	\$6.886
	- Vehicles	0	\$0.000	0	\$0.000	1	\$0.700
	- Material Handling	1	\$0.349	2	\$0.701	2	\$0.740
	- Installation Security	0	\$0.000	0	\$0.000	0	\$0.000
	- Quality Control/Testing	2	\$0.779	7	\$4.644	4	\$2.756
	- Medical Equipment	0	\$0.000	0	\$0.000	0	\$0.000
	- Machinery	1	\$0.777	1	\$0.158	0	\$0.000
	- Support Equipment	3	\$1.794	2	\$0.510	4	\$2.690
2	ADPE and Telecom Equipment >= \$.250M	11	\$4.750	15	\$5.436	8	\$2.936
	- Computer Hardware (Production)	6	\$1.713	7	\$2.718	5	\$1.966
	- Computer Hardware (Network)	4	\$2.682	8	\$2.718	2	\$0.610
	- 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	\$0.355	0	\$0.000	1	\$0.360
3	Software Development >= \$.250M	4	\$1.162	6	\$3.637	2	\$0.840
	- Internally Developed	3	\$0.964	5	\$3.445	1	\$0.490
	- Externally Developed	1	\$0.198	1	\$0.192	1	\$0.350
4	Minor Construction (>= \$.250M and <= \$1.000M)	7	\$2.297	10	\$4.155	8	\$3.985
	- Replacement Capability	0	\$0.000	0	\$0.000	1	\$0.375
	- New Construction	7	\$2.297	10	\$4.155	6	\$2.865
	- Environmental Capability	0	\$0.000	0	\$0.000	1	\$0.745
	Grand Total	29	\$11.908	43	\$19.241	29	\$14.647
	Total Capital Outlays		\$10.842		\$14.566		\$14.789
	Total Depreciation Expense		\$11.723		\$14.768		\$14.705

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development	#001 - Non-ADP Equipment						Naval Undersea Warfare Center		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	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	1	349	\$349	2	351	\$701	2	370	\$740
Installation Security	0		\$0	0		\$0	0		\$0
Quality Control/ Testing	2	390	\$779	7	663	\$4,644	4	689	\$2,756
Medical Equipment	0		\$0	0		\$0	0		\$0
Machinery	1	777	\$777	1		\$158	0		\$0
Support Equipment	3	598	\$1,794	2	255	\$510	4	673	\$2,690
Total	7	528	\$3,699	12	501	\$6,013	11	626	\$6,886
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 - Environmental and marine mammal mitigation measures - Autonomous and advanced sensor systems - Rapid prototyping and fabrication of USW systems - USW obsolescence engineering - Material handling - Undersea tracking range development and operation - Undersea communication system development and testing - USW sonar systems calibration and testing - Torpedo and unmanned systems in-service engineering - USW materials fabrication 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 0.1 – 11.9 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. Titanium Manufacturing System - FY18 \$1.120K - This CIP Project will procure a Direct Metal Laser Sintering (DMLS) machine to establish a coherent, production class additive manufacturing capability at the Division. Project will procure an additive manufacturing system. Additive manufacturing systems are tools that each WC Division needs in their tool box to rapidly produce parts for conceptual development and rapid prototyping. While not every WC Division needs to buy multiple additive manufacturing systems, a basic prototyping capability should be available at all Divisions. Newport is part of the WC Additive Manufacturing working group. The payback period of this investment is 2.5 years for FY18.									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development	#002 - ADP Equipment						Naval Undersea Warfare Center		
ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	6	286	\$1,713	7	388	\$2,718	5	393	\$1,966
Computer Hardware (Network)	4	671	\$2,682	8	340	\$2,718	2	305	\$610
Computer Software (Operating System)	0		\$0	0		\$0	0		\$0
Telecommunications	0		\$0	0		\$0	0		\$0
Other Support Equipment	1	355	\$355	0		\$0	1	360	\$360
Total	11	432	\$4,750	15	362	\$5,436	8	367	\$2,936
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 0.6 - 6.0 years. Classified Fiber Encryption - (FY16 - \$1.938K) Newport - Computer Hardware Network - Procure and install NSA Type 1 encryptors into the Naval Undersea Warfare Center Division Newport Classified Fiber. The NUWCDIVNPT classified fiber infrastructure must become compliant with IA Pub 5239-22. The payback period of this investment is 9.6 years for FY16.									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development		#003 - Software Development					Naval Undersea Warfare Center		
Software	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	3	321	\$964	5	689	\$3,445	1	490	\$490
Externally Developed	1	198	\$198	1	192	\$192	1	350	\$350
Total	4	291	\$1,162	6	606	\$3,637	2	420	\$840
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 .5 - 4.1 years. eCraft Enterprise Solution - (FY17- \$2,200) 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.									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development		#004 - Minor Construction (\$250K - \$1 M)					Naval Undersea Warfare Center		
Minor Construction	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0		\$0	0		\$0	1	375	\$375
New Construction	7	328	\$2,297	10	416	\$4,155	6	478	\$2,865
Environmental Capability	0		\$0	0		\$0	1	745	\$745
Total	7	328	\$2,297	10	416	\$4,155	8	498	\$3,985
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, However, one MCON project does exceed the threshold specified by 10 USC 2805. The below MCON projects utilizes Sec. 2804 of the FY08 National Defense Authoriztion 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.									
Unmanned Systems Prototyping and Experimentation Facility - FY17 \$1.185K - 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.									

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$4.618	\$3.699	-\$0.919	
			Vehicles	\$0.000	\$0.000	\$0.000	
			Material Handling	\$0.500	\$0.349	-\$0.151	FY16 Actuals
			Installation Security	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$1.276	\$0.779	-\$0.497	FY16 Actuals
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.935	\$0.777	-\$0.158	FY16 Actuals
			Support Equipment	\$1.907	\$1.794	-\$0.113	FY16 Actuals
	2	ADP		\$5.735	\$4.750	-\$0.985	
			Computer Hardware (Production)	\$2.390	\$1.713	-\$0.677	FY16 Actuals
			Computer Hardware (Network)	\$2.990	\$2.682	-\$0.308	FY16 Actuals
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$0.000	\$0.000	\$0.000	
			Other Support Equipment	\$0.355	\$0.355	\$0.000	
	3	Software		\$2.985	\$1.162	-\$1.823	
			Internally Developed	\$2.595	\$0.964	-\$1.631	FY16 Actuals
			Externally Developed	\$0.390	\$0.198	-\$0.192	FY16 Actuals
	4	Minor Construction		\$3.245	\$2.297	-\$0.948	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$2.100	\$2.297	\$0.197	FY16 Actuals
			Environmental Capability	\$1.145	\$0.000	-\$1.145	FY16 Actuals
TOTAL FY 2016 CIP Program				\$16.583	\$11.908	-\$4.675	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$7.051	\$6.013	-\$1.038	
			Vehicles	\$0.700	\$0.000	-\$0.700	Updated based on program review/current mission requirements.
			Material Handling	\$0.550	\$0.701	\$0.151	Updated based on program review/current mission requirements.
			Installation Security	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$2.511	\$4.644	\$2.133	Updated based on program review/current mission requirements.
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.158	\$0.158	Updated based on program review/current mission requirements.
			Support Equipment	\$3.290	\$0.510	-\$2.780	Updated based on program review/current mission requirements.
	2	ADP		\$3.425	\$5.436	\$2.011	
			Computer Hardware (Production)	\$1.964	\$2.718	\$0.754	Updated based on program review/current mission requirements.
			Computer Hardware (Network)	\$1.461	\$2.718	\$1.257	Updated based on program review/current mission requirements.
			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		\$1.165	\$3.637	\$2.472	
			Internally Developed	\$1.165	\$3.445	\$2.280	Updated based on program review/current mission requirements.
			Externally Developed	\$0.000	\$0.192	\$0.192	Updated based on program review/current mission requirements.
	4	Minor Construction		\$3.055	\$4.155	\$1.100	
			Replacement	\$0.900	\$0.000	-\$0.900	Updated based on program review/current mission requirements.
			New Construction	\$2.155	\$4.155	\$2.000	Updated based on program review/current mission requirements.
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2017 CIP Program				\$14.696	\$19.241	\$4.545	

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$0.000	\$6.886	\$6.886	
			Vehicles	\$0.000	\$0.700	\$0.700	
			Material Handling	\$0.000	\$0.740	\$0.740	New program year added to budget
			Installation Security	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$0.000	\$2.756	\$2.756	New program year added to budget
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$2.690	\$2.690	New program year added to budget
	2	ADP		\$0.000	\$2.936	\$2.936	
			Computer Hardware (Production)	\$0.000	\$1.966	\$1.966	New program year added to budget
			Computer Hardware (Network)	\$0.000	\$0.610	\$0.610	New program year added to budget
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$0.000	\$0.000	\$0.000	
			Other Support Equipment	\$0.000	\$0.360	\$0.360	New program year added to budget
	3	Software		\$0.000	\$0.840	\$0.840	
			Internally Developed	\$0.000	\$0.490	\$0.490	New program year added to budget
			Externally Developed	\$0.000	\$0.350	\$0.350	New program year added to budget
	4	Minor Construction		\$0.000	\$3.985	\$3.985	
			Replacement	\$0.000	\$0.375	\$0.375	New program year added to budget
			New Construction	\$0.000	\$2.865	\$2.865	New program year added to budget
			Environmental Capability	\$0.000	\$0.745	\$0.745	New program year added to budget
TOTAL FY 2018 CIP Program				\$0.000	\$14.647	\$14.647	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL UNDERSEA WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Part 1			
1. Net Carry-In	585.7	624.4	644.7
2. Revenue	1,105.7	1,201.3	1,219.1
3. New Orders	1,144.4	1,221.6	1,232.5
4. Exclusions:			
Foreign Military Sales	99.1	130.4	131.9
Base Realignment and Closure	-	-	-
Other Federal Department and Agencies	5.9	6.8	6.8
Non-Federal and Others	37.0	32.6	33.1
Institutional Major Range & Test Facility Base	68.5	62.6	63.8
OUSD(C) Approved Carryover Waiver	-	-	-
5. Orders for Carryover Calculation	934.0	989.2	996.9
6. Weighted Average Outlay Rate	47.8%	54.2%	54.2%
7. Carryover Rate	52.2%	45.8%	45.8%
8. Allowable Carryover	610.7	519.4	528.5
Allowable Carryover(First Year)	487.5	453.1	456.6
Allowable Carryover (Second Year Procurement-funded Orders)	123.1	66.4	72.0
Part II			
9. Balance of Customer Order at Year End	624.4	644.7	658.0
10. Work-in-progress	-	-	-
11. Exclusions:			
Foreign Military Sales	174.5	180.3	187.5
Base Realignment and Closure	-	-	-
Other Federal Department and Agencies	2.7	2.9	3.7
Non-Federal and Others	35.5	35.3	38.6
Institutional Major Range & Test Facility Base	29.2	27.3	28.7
OUSD(C) Approved Carryover Waiver	-	-	-
12. Calculated Actuals Carryover	382.6	398.9	399.6

Some totals may not add due to rounding.

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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) 2018 BUDGET ESTIMATES
MAY 2017

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 the 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
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Significant Changes Since the FY 2017 President's Budget: The FY 2017 budget estimate has been updated to reflect the actual civilian pay raise; an increase in direct labor hours associated with anticipated workload and revised general inflation estimates, including fuel.

The FY 2018 budget estimate includes other changes as a result of the pay raise, inflation/pricing, facility sustainment and investments in research and development as described in the Section 212 of FY 2017 National Defense Authorization Act.

Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$2,273.5	\$2,368.0	\$2,333.7
Revenue	\$2,278.4	\$2,349.5	\$2,437.0
Expense	<u>\$2,274.5</u>	<u>\$2,360.9</u>	<u>\$2,439.4</u>
Operating Results	\$3.9	(\$11.4)	(\$2.4)
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>(\$11.5)</u>
Net Operating Results (NOR)	\$3.9	(\$11.4)	(\$13.9)
Prior Year AOR	\$21.4	\$25.3	\$13.9
Other Changes Affecting AOR	\$0.0	\$0.0	\$0.0
Accumulated Operating Results (AOR)	<u>\$25.3</u>	<u>\$13.9</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Revenue and Expense: Changes in orders from FY 2016 to FY 2018 are based on updated new orders estimates as coordinated with customers. Contributing to the change in revenue and expense from FY 2016 to FY 2018 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, inflation/pricing, and investments in research and development as described in the Section 212 of FY 2017 National Defense Authorization Act. In addition, the \$11.5 million capital surcharge in FY 2018 is to fund vital Capital Investment Program (CIP) increases that are higher than depreciation.

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$2,244.2	\$2,337.5	\$2,426.8
Disbursements	<u>\$2,305.5</u>	<u>\$2,352.7</u>	<u>\$2,405.6</u>
Outlays	<u>\$61.3</u>	<u>\$15.2</u>	<u>(\$21.2)</u>

Some totals may not add due to rounding.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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:

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	10,393	10,519	10,689

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, In-Service Engineering (ISEA), TacMobile lifecycle engineering & support, and electronic warfare technologies.

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.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$1,140.1	\$1,164.7	\$1,223.0
Workload (DLHs) (000)	10,393	10,519	10,689
Unit cost (per DLH)	\$109.70	\$110.72	\$114.42

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 2018 unit cost reflects stabilized costs per associated stabilized hours as an expense rate.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

<u>Stabilized / Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$108.29	\$108.42	\$114.56
Change from Prior Year	1.09%	0.12%	5.66%
Composite Rate Change	1.62%	1.04%	3.78%

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. The composite rate change in FY 2018 reflects adjustments to direct workload and pricing changes

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	8,308	8,568	8,663
Civilian Workyears (straight time)	8,253	8,403	8,528
Military End Strength	78	81	80
Military Workyears	81	81	80

Civilian Personnel: Civilian strength levels, measured by both end strength and full-time equivalents (FTEs) remain steady in FY 2018.

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 2018.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Capital Investment Program (CIP):

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$0.0	\$0.0	\$0.0
Equipment, ADPE / Telecom	\$1.3	\$3.1	\$5.3
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$6.9</u>	<u>\$12.6</u>	<u>\$13.7</u>
Total	<u>\$8.2</u>	<u>\$15.7</u>	<u>\$19.0</u>

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 temporary buildings and upgrade and expand lab capability to accommodate workload growth and increase efficiency.

<u>Carryover Compliance: (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$1,121.3	\$1,116.4	\$1,134.9
Allowable Carryover	\$1,364.4	\$1,114.5	\$1,076.0
Calculated Actual Carryover	\$894.1	\$913.4	\$814.1
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$470.3)	(\$201.1)	(\$261.9)

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 - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
Revenue:			
Gross Sales			
Operations	2,271.7	2,341.2	2,418.0
Capital Surcharges	-	-	11.5
Capital Investment Recovery	6.7	8.3	7.5
Other Income			
Total Income	2,278.4	2,349.5	2,437.0
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	7.7	7.9	7.9
Civilian Personnel Compensation & Benefits	1,144.3	1,178.0	1,217.5
Travel and Transportation of Personnel	44.2	44.6	45.8
Material & Supplies (Internal Operations)	185.8	200.9	202.9
Equipment	128.6	80.4	79.9
Other Purchases from NWCF	36.0	22.5	22.9
Transportation of Things	7.2	5.5	5.6
Capital Investment Recovery	6.7	8.3	7.5
Printing and Reproduction	0.8	0.2	0.2
Advisory and Assistance Services	-	-	-
Rent, Communication, Utilities & Misc Charges	37.5	41.7	41.2
Other Purchased Services	675.8	771.0	808.0
Total Expenses	2,274.5	2,360.9	2,439.4
Work in Process Adjustment	-	-	-
Comp Work for Activity Retention Adjustment	-	-	-
Cost of Goods Sold	2,274.5	2,360.9	2,439.4
Operating Result	3.9	(11.4)	(2.4)
Adjustments Affecting NOR	-	-	(11.5)
Capital Surcharges	-	-	(11.5)
Extraordinary Expenses Unmatched	-	-	-
Other Changes Affecting NOR (All Others)	-	-	-
Net Operating Result	3.9	(11.4)	(13.9)
PY AOR	21.4	25.3	13.9
TOTAL AOR	25.3	13.9	-
Non-Recoverable Adjustments impacting AOR	-	-	-
AOR for budget purposes	25.3	13.9	-

Exhibit Fund-14 Revenue and Expenses

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
1. New Orders	2,273.5	2,368.0	2,333.7
a. Orders from DoD Components:	1,982.0	2,069.7	2,031.6
Department of the Navy	1,564.7	1,598.4	1,566.6
O & M, Navy	490.1	528.1	553.6
O & M, Marine Corps	88.3	115.6	123.0
O & M, Navy Reserve	6.1	10.8	10.7
O & M, Marine Corp Reserve	0.8	0.4	0.4
Aircraft Procurement, Navy	10.4	8.5	8.5
Weapons Procurement, Navy	1.3	0.9	0.9
Ammunition Procurement, Navy/MC	-	-	-
Shipbuilding & Conversion, Navy	51.2	62.8	65.4
Other Procurement, Navy	573.9	543.0	498.9
Procurement, Marine Corps	43.1	40.7	19.7
Family Housing, Navy/MC	0.5	0.7	0.7
Research, Dev., Test, & Eval., Navy	298.2	283.8	281.9
Military Construction, Navy	0.2	1.3	0.8
National Defense Sealift Fund	0.6	0.2	0.2
Other Navy Appropriations	0.0	1.7	1.7
Other Marine Corps Appropriations	-	-	-
Department of the Army	40.2	47.9	45.6
Army Operation & Maintenance	18.0	19.1	19.4
Army Res, Dev, Test, Eval	15.4	15.4	13.8
Army Procurement	5.6	12.5	11.9
Army Other	1.2	0.8	0.6
Department of the Air Force	89.7	104.2	106.9
Air Force Operation & Maintenance	47.7	52.3	55.4
Air Force Res, Dev, Test, Eval	36.8	42.6	42.9
Air Force Procurement	5.2	9.2	8.7
Air Force Other	-	-	-
DOD Appropriation Accounts	287.4	319.3	312.6
Base Closure & Realignment	0.4	-	-
Operation & Maintenance Accounts	79.1	79.6	78.3
Res, Dev, Test & Eval Accounts	93.5	122.1	114.0
Procurement Accounts	32.8	19.6	21.1
Defense Emergency Relief Fund	-	-	-
DOD Other	82.4	98.0	99.1
b. Orders from other Fund Activity Groups	122.1	107.2	108.3
c. Total DoD	2,104.1	2,176.9	2,139.9
d. Other Orders:	169.4	191.1	193.8
Other Federal Agencies	89.6	99.4	104.4
Foreign Military Sales	48.8	45.1	51.2
Non Federal Agencies	31.0	46.6	38.2
2. Carry-In Orders	1,121.3	1,116.4	1,134.9
3. Total Gross Orders	3,394.8	3,484.4	3,468.6
a. Funded Carry-Over before Exclusions	1,116.4	1,134.9	1,031.6
4. Revenue(-)	2,278.4	2,349.5	2,437.0
5. End of Year Work-In-Process (-)	-	-	-
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	222.3	221.5	217.5
7. Funded Carryover	894.1	913.4	814.1

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
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2016 Actuals	2,274.5
FY 2017 President's Budget:	2,394.4
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	0.0
Pricing Adjustments:	4.2
Civilian Personnel	4.2
Fuel Price	0.0
Program Changes:	-38.8
Common Submarine Radio Room (CSRR)	-23.0
Consolidated Afloat Networks and Enterprise Services (CANES)	-5.6
Marine Corps Networking On-The-Move (NOTM)	-5.3
Distributed Common Ground Systems-Navy (DCGS-N)	-3.2
Visual Information Display System	-1.7
Other Changes:	1.1
Capital Investment Recovery	0.3
Facilities Sustainment, Restoration & Modernization	0.2
Other	0.6
FY 2017 Current Estimate:	2,360.9

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	2,360.9
Pricing Adjustments:	46.2
Annualization of Prior Year Pay Raises	6.6
Civilian Personnel	6.5
Military Personnel	0.0
FY 2018 Pay Raise	16.4
Civilian Personnel	16.3
Military Personnel	0.1
Fuel Price Changes	0.0
General Purchase Inflation	22.4
Other Price Changes	0.8
Working Capital Fund Price Changes	0.8
Program Changes:	32.8
Naval Innovative Science & Engineering (NISE)	19.2
In-Service Engineering (ISEA)	4.1
TacMobile Lifecycle Engineering & Support	4.4
United States Navy Tactical Vehicles	3.3
Distributed Common Ground System - Navy (DCGS-N)	1.9
Other Changes:	-0.5
Facilities Sustainment, Restoration & Modernization	1.1
Help Desk Consolidation	-0.6
Capital Investment Recovery	-0.8
Other	-0.2
FY 2018 Estimate:	2,439.4

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CAPITAL INVESTMENT SUMMARY							
DEPARTMENT OF THE NAVY							
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS							
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES							
MAY 2017							
(DOLLARS IN MILLIONS)							
Line #	Description	FY 2016		FY 2017		FY 2018	
		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	3	\$1.313	4	\$3.133	3	\$5.300
	- Computer Hardware (Production)	2	\$0.113	3	\$2.533	1	\$2.100
	- Computer Hardware (Network)	1	\$1.200	1	\$0.600	2	\$3.200
	- 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 <= \$6.000M)	5	\$6.943	9	\$12.587	9	\$13.707
	- Replacement Capability	0	\$0.124	3	\$5.955	0	\$0.000
	- New Construction	5	\$6.819	6	\$6.632	9	\$13.707
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	Grand Total	8	\$8.256	13	\$15.720	12	\$19.007
	Total Capital Outlays		\$11.150		\$15.063		\$12.311
	Total Capital Investment Recovery		\$6.704		\$8.280		\$7.500

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development		#002 - ADP Equipment					Space and Naval Warfare Systems Centers		
ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	2	57	\$113	3	844	\$2,533	1	2,100	\$2,100
Computer Hardware (Network)	1	1,200	\$1,200	1	600	\$600	2	1,600	\$3,200
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	3	438	\$1,313	4	783	\$3,133	3	1,767	\$5,300
Justification: PROJECT UNDER \$1M Investments in the computer hardware (Production) capability will serve to enhance and add more breadth to existing technological capabilities at SPAWAR Systems Centers. More powerful, analytical, long range tools will allow data and reporting products to be easily sent from coast to coast, allowing for shared strategic planning and analysis. In addition, it will also provide increased capability to insert workflow solutions to make data available to reengineered business processes in an integrated hardware environment Pre-investment cost analyses were performed for all projects. If these investments are not made, it will hinder the ability to easily share data and reporting products and to coordinate in strategic planning. Investments 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) 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 pre-investment 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 at SPAWAR. If this investment is not made it will result in a lack of networking support, continued limited computer and storage capability, and limit ability to 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. PROJECT ABOVE \$1M The "RDT&E Network Upgrade" project for FY 16 and FY18 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) and Asynchronous Transfer Mode (ATM) protocols. Specifically, the FY 16 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, HVAC and floor space requirements. In addition, the FY18 project will improve scalability, recoverability, and reduce power consumption. A pre-investment cost analysis was performed for this project. Without this upgrade, portions of the current RDT&E network architecture will not support the future networking needs of the research, development, and in-service engineering communities at SPAWAR. If this investment is not made it will result in a lack of networking support, continued limited computer and storage capability, and limit ability to 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 **“Informatics Platform”** project in FY17 in the computer hardware (production) will help expand and mature technical capabilities in delivering cost-effective, efficient and scalable information technology applications and services for its internal business operations. These are multi-faceted efforts that begin to address weaknesses in the essential aspects of SPAWAR SYSTEM CENTER (SSC) Atlantic’s internal Information Technology (IT) architecture, enterprise data, and business processing in an integrated, holistic manner. The resulting product is an integrated IT lifecycle environment/platform to consolidate and standardize tools, libraries, and processing capabilities upon which existing as well as new business functionality composed of discrete software architecture, data, and business processes can be modeled, configured, deployed and utilized across the Command. This will extend functional capability of the existing SSC Atlantic automated information system referred to as the “Integrated Software Services Framework (ISSF)”. This will result in greater integrity of data and information with streamlined integration into the Command’s existing Business Intelligence capabilities thus enhancing decision making at all levels of the enterprise. A cost analysis has been performed. Savings and operational value realization would begin in FY19. If this investment is not made, the delivery and integration of data and information into the Command’s existing Business Intelligence capabilities will continue to be non-standard and distributed, thus incurring redundant costs and hindering data integrity and streamlined data-driven decision making.

The **“Informatics Architecture”** project in FY18 in the computer hardware (production) will help expand and mature technical capabilities in delivering cost-effective, efficient and scalable information technology applications and services for its internal business operations. These are multi-faceted efforts that begin to address weaknesses in the essential aspects of SSC Atlantic internal IT architecture, enterprise data, and business processing in an integrated, holistic manner. Enhanced business functionality, composed of discrete software architecture, data, and business processes will be modeled, configured, and deployed for utilization across the Command via a business process re-engineering pilot effort. This will result in greater integrity of data and information with streamlined integration into the Command’s existing Business Intelligence capabilities thus enhancing decision making at all levels of the enterprise. A cost analysis has been performed. Savings and operational value realization would begin in FY19. If this investment is not made, the delivery and integration of data and information into the Command’s existing Business Intelligence capabilities will continue to be non-standard and distributed, thus incurring redundant costs and hindering data integrity and streamlined data-driven decision making.

The **“TACLANE Encryptors Upgrade”** project in FY18 in the computer hardware (network) provides 48 TACLANE encryptors for the Secret Wide Area Network (SWAN) and the Secure Defense Research and Engineering Network (SDREN). Currently providing Secret-level encryption over the RDTE network on 100Mb (to the desktop) and 1Gb (core) General Electric TACLANEs. The core TACLANEs are going End of Life (EOL) within 2-3 years. Current devices do not have ability to do network security separation via Virtual Local Area Networks (VLANs). Security Technical Implementation Guide (STIG) requirements for whole network separation is unable to be met globally therefore must try to be mitigated at the local lab level. Bandwidth at times seen to max out to labs. Must replace the EOL TACLANEs with a solution that will sustain network and security growth 10 years into the future. Solution must enable VLAN technology over Layer 2 encryptors to allow for network separation of devices to lower risk level. Allow for full STIG compliance with an enterprise level solution for system, data, voice, risk level management, and Program of Record segregation while better aligning with Research, Development, Test and Evaluation (RDT&E) network processes and restrictions. An economic analysis was performed; there are no cost savings as the equipment is at end of life and does not support requirements; the TACLANEs must be upgraded. EOL equipment will no longer be supported resulting in high security risk, low reliability of network, and STIG non-compliance. Without Layer 2 VLAN technology, the network cannot quarantine high-risk and non-accredited systems or separate by Community of Interest (COI) or system/application types, as required per STIG. Bandwidth growth for SSC Pacific projects will not be met, network management of encryptors will remain as a time-intensive manual processes, and SSC Pacific will trail the industry on network security and technology.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)				MAY 2017						
Department of the Navy/ Research and Development		#004 - Minor Construction (\$250K - \$1M)					Space and Naval Warfare Systems Centers			
		FY 2016			FY 2017			FY 2018		
Minor Construction		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement		0	0	\$124	3	1,985	\$5,955	0	0	\$0
New Construction		5	1,364	\$6,819	6	1,105	\$6,632	9	1,523	\$13,707
Environmental Capability		0	0	\$0	0	0	\$0	0	0	\$0
Total		5	1,389	\$6,943	9	1,399	\$12,587	9	1,523	\$13,707
Justification:										
All projects are within the \$6 million threshold for minor construction afforded by the Defense Laboratory Revitalization Act.										
REPLACEMENT										
PROJECTS UNDER \$1M										
The project in 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 enhance current capabilities in Research, Development, Test and Evaluation (RDT&E) work and future requirements. An economic and cost analysis has been performed on this project. However, the Lab expansion will not provide any cost savings/cost avoidance. There are no other classified lab space that can support RDT&E work and future requirements. Possibility of security incident increases if classified space is not available and a periods processing environment needs to be established.										

PROJECTS ABOVE \$1M:

The **“Building 198 Laboratory Infrastructure”** is a project for SPAWAR SYSTEM CENTER (SSC) Atlantic in FY17. 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 transition will require infrastructure changes to be made to the building's code-deficient fire protection system, the HVAC system and the overall electrical and Information Technology (IT) infrastructure to improve operational efficiency. The DIF work environments will range from informal to private spaces, promoting mobility, collaboration, increased speed in decision-making and drive collective innovation. The improvements will provide additional HVAC capacity and proper airflow distribution for associated spaces. Additional electrical distribution capacity, not currently available, will be provided in the form of Uninterruptible Power Supply (UPS) and generator power. An economic analysis has not been performed. No initial cost savings will be recognized due to the increased mechanical and electrical capacity necessary for the DIF program. However, long term cost saving benefits may be recognized in the form of increased production levels once the DIF is fully operational. If not executed, Building 198's DIF transition will be problematic. The resulting facility will operate at less than maximum efficiency and productivity. Additionally, the code-based improvements to the fire protection system will be deficient. This project is part of Lab Revitalization Demonstration Program (LRDP).

The **"High Voltage Laboratory"** is a project for SSC Pacific in FY 17. The existing facilities provide basic storage and a facility which is capable of radio frequency (RF) breakdown testing of materials that is limited by the ceiling height, room size and similar safety considerations. Current capabilities are limited by facilities that do not satisfy safety and HAZMAT requirements. The facilities barely meet the needs of a single program, which as a result requires travel to other locations to complete testing. Expansion of capabilities to take advantage of expertise and equipment at SSC Pacific will open up high voltage and power testing on site to multiple projects and programs. This project will allow one-stop services for evaluation of systems for high power vulnerabilities, potential use of new materials, environmental testing and functional RF testing. This investment would also allow us to work with any Command, Control, Communication, Computers & Intelligence (C4I) devices developed in academia or industry using nanomaterials, or develop our own devices. Alternatives considered were permanently moving business areas away from SSC Pacific San Diego to other sites, use of more contractors, and adaptation of existing facilities. These alternatives will result in higher cost and would be detrimental to the overall Navy effort. An economic analysis was performed. Having an onsite facility will lower the travel cost. By not investing in improved high power testing, it will be required for beneficiary projects and programs to go off site for high voltage and high power testing. In the current travel constrained environment, this means giving up this business area. Without investing in modern facilities SSC Pacific will be unable to recruit or keep experts in nanomaterials and maintain its role as a full spectrum C4ISR leader. This project is part of 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 and estimated savings/cost avoidance for the projects over the cost benefit period are minimal.

PROJECTS UNDER \$1M

Current space and power and cooling configuration are insufficient to meet current mission requirements for support of projects. One project will provide an underfloor plenum Computer Room Air Conditioning (CRAC) unit will increase the cooling capacity of the facility. Another three projects will construct electrical substations in order to provide additional electrical power. The stable, uninterrupted electrical power to facilities will allow SPAWAR to not only support for future construction, but also maintain the mission readiness. These projects are needed in order to prevent electrical deficiencies, insufficient cooling and lack of full utilization of the existing facility. Without these projects there will be a loss of productivity and equipment failure, which will jeopardize cost, schedule, and performance for current and future projects, as well as ability to conduct critical work for the DoD warfighter. Cost analysis has been performed and no cost savings are expected for these projects. Another project will construct a boat washing facility which will improve the efficiency of the boat launch and recovery process, and at-sea operations. The ability to clean boats in a separate area will free up the ramp for launch and recovery of other boats as well as enable "emergent" launches and recoveries. In addition, it will also eliminate boat washing activities that discharge to the Bay. Cost analysis has been performed. Cost savings are expected for this project due to less labor and maintenance cost required for the new facility. Another project will provide a unique facility to support cyber requirements with labs to enable a highly trained cyber workforce to conduct information assurance (IA), computer network operations, cyber forensics, and cyber security and to develop and deploy command and control, communications, computer, intelligence, surveillance, and reconnaissance systems for the Navy. Without an adequate facility SSC's will not be able to accept additional Cyber Forensics work and will not be to perform the required research, development, and testing of network defense, network exploitation and network attack tools/capabilities necessary to support the warfighters. Cost analysis has been performed and no cost savings are expected for these project. Another project will improve the heating, ventilation and air conditioning (HVAC) system, lighting and electrical system as well as improve handicap accessibility throughout the building. Without the improvements the building would lack functionality and our ability to meet the commitments made to the customers. Cost analysis has been performed for this project.

PROJECTS ABOVE \$1M:

The "**Cyber Warfare Lab**" project for SSC Atlantic in FY16 will provide a unique facility to support cyber requirements with labs to enable a highly trained cyber workforce to conduct information assurance (IA) , computer network operations, cyber forensics, and cyber security and to develop and deploy command and control, communications, computer, intelligence, surveillance, and reconnaissance systems for the Navy. SSC Atlantic is currently unable to accept additional Cyber Forensics work due to the lack of adequate facilities. Without this investment, SSC Atlantic would be unable to perform the required research, development, and testing of network defense, network exploitation and network attack tools/capabilities necessary to support the warfighter. Not making this investment would also hinder the ability to adequately hone the skills of the current and future cyber workforce. . This project is part of Lab Revitalization Demonstration Program (LRDP).

The "**V53 Modernization**" project for SSC Atlantic in FY 16 and FY 17 consists of a 9,910 square feet (SF) Communication Lab on the second deck and associated administrative space. The laboratory is considered mission critical and requires upgrades to its overall infrastructure. The project will increase the electrical and mechanical (HVAC) capacity/capabilities by installing supplemental panel boxes and switching equipment and larger capacity air conditioning units. Modernization and upgrades to the floor decking and damaged or deteriorating floor and ceiling tiles will be included. This project will increase the electrical and mechanical capacity/capabilities of the facility which will create additional power usage. The current power resources and cooling capacity in the Building V53 lab have reached maximum capacity and at times have risked equipment shut downs. The mission critical operations in the lab will continue to be in jeopardy without the needed power and HVAC upgrades. This project is part of Lab Revitalization Demonstration Program (LRDP).

The "**Mobile Information and Cellular Communications Technology Engineering Center (MICCTEC)**" project for SSC Pacific in FY 16 and FY 17 will create a facility and applications for Naval RDT&E that do not currently exist at any US Navy government facility. These facilities do not currently exist due to the high cost of cellular communication equipment and the relatively large amount of laboratory floor space and resources (HVAC and power) this equipment requires. The purpose of this new facility is to become the home of a Naval RDT&E and sustainment capability for mobile cellular communications technology and applications. It will house the communications, network and applications development equipment for 3G Wideband Code Division Multiple Access (WCDMA), 4G Long Term Evolution (LTE), 4G Worldwide Interoperability for Microwave Access (WiMAX), and Mobile Objective User System (MUOS) WCDMA cellular mobile communications. In FY17, the Program Office plans to move the MUOS Test-Radio Access Facility (T-RAF) Satellite Communications (SATCOM) Control and WCDMA equipment suite, the MUOS Reference Implementation Laboratory (RIL), and the WCDMA equipment suite to SSC Pacific. Due to increasing Cyber protection, IT engineering, and IT sustainment support needed by the Navy, there is no laboratory space at SSC Pacific currently existing that would meet the requirements of the MUOS Program. The MUOS RIL supports MUOS networking waveform development and test, WCDMA engineering support, and program of record (POR) and Non-Developmental Item (NDI) radio development and test. Without this project, the MUOS RIL will have inadequate lab space and will have to limit the number of POR and NDI contractors doing developmental testing in their laboratory. Since the MUOS waveform is based on modifications to commercial cellular WCDMA technology this encourages a natural progression for the MICCTEC to also be the potential home of any fourth generation (4G) Long Term Evolution (LTE) and 4G Worldwide Interoperability for Microwave Access (WiMAX) communications suites for RDT&E support of Naval Customers. Savings to the Navy will begin in FY16 for an estimated 4 years after this facility has been completed and the MUOS T-RAF equipment has been installed, tested, and made ready for use. It is estimated that having this equipment at a government facility would have cost avoidance of over \$6M in WCDMA waveform engineering support and ground system sustainment support versus placing this equipment at a contractor facility and purchasing a subset test capability for government engineering support. MUOS is one of the Navy's key future SATCOM systems and its 3G cellular WCDMA, protected capabilities will revolutionize Navy small deck, littoral, and ground operations communications. If this project is not completed, SSC Pacific would be unable to support the MUOS T-RAF requirement as there is not currently a facility large enough. The development and deployment of MUOS user terminals and the development of user communications CONOPS and Cyber protection knowledge would be hindered. Also, there are no current communication laboratory facilities with the capacity needed for naval 4G Cellular communications development, test and evaluation. Without this capability the Navy will not be able to evaluate 4G technologies for tactical use and cyber protection. This project is part of Lab Revitalization Demonstration Program (LRDP).

The **“Building 3147 1L13 Reconfiguration”** project for SSC Atlantic in FY 17 consists of a 256,000 square feet (SF) facility, constructed in 1997. The building houses administrative spaces and twelve Electrical, Electronics & Communications Integration Laboratories. Lab 1L13 will be reconfigured/renovated to create a Cyber Range Operations Center(C-ROC) within the lab space. The laboratory is considered mission critical. The project will renovate Building 3147, Lab 1L13 to include the construction of a new server room to accommodate 35 server racks, replace existing raised deck floor tiles and suspended ceiling tiles, install carpet on the concrete deck portion of the lab, paint walls, install new systems furniture and lab work benches, install additional emergency lighting, upgrade the lab security to current standards and install a new telecommunications cabling for unclassified and classified IT systems. An Economic Analysis has been performed and there are no cost savings anticipated.

The **“Building 187 Production Engineering Facility”** project for SSC Atlantic in FY 18 consist of a 44,281 square feet (SF) facility, constructed in 1962. Building originally been constructed for use on the former Navy Base, its function has changed over the years. This whole building project will overhaul the HVAC system and lighting, add handicap features to the restrooms and improve finishes throughout the building. Lead and asbestos abatement are included in this overhaul. 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. This laboratory is considered mission critical. A cost analysis has been performed for this project. Without the overhaul of the whole building, the existing facility’s age and its current functionality will hamper the efficiency and capability required to meet commitments made to the customers. This project is part of Lab Revitalization Demonstration Program (LRDP).

The **“Building 171 Modernization”** is a project for SSC Atlantic in FY 18. This building houses an Electrical, Electronics & Communications Integration Lab and the associated administrative space. The laboratory is considered mission critical and requires upgrades to its overall infrastructure. The project will increase the electrical and mechanical HVAC capacity/capabilities by installing supplemental panel boxes and switching equipment and larger capacity air conditioning units. Modernization and upgrades to the deteriorating raised floor decking, and damaged or deteriorating floor and ceiling tiles will be included. The power resources and cooling capacity in Building 171 have reached maximum capacity and at times have risked equipment shut downs. The mission critical operations in Building 171 will continue to be in jeopardy without the needed power and HVAC upgrades. This project is part of Lab Revitalization Demonstration Program (LRDP).

The **“Building 198 Laboratory Reconfiguration”** is a project for SSC Atlantic in FY18. This project reconfigures existing space in Building 198, an Electrical, Electronics & Communications Integration Laboratory, commonly known as the Vehicle Integration Bay (VIB). The project will include construction of new walls for a reconfigurable laboratory space, an IT server room, office spaces, conference room and collaborative space. Reconfiguration of the space will provide a laboratory platform in support of the Marine Corps and Expeditionary forces by providing a reconfigurable lab environment supporting Marine Air Ground Task Force communications capability Systems of Systems, United States Marine Corp Intel Systems, Networking On-The-Move, Hand Held Command and Control, Data Interchange Format, NUCLEUS, INTEL Cloud, United States Marine Corp Comms Systems, Global Command and Control System-Marine Corp, Direct Support General Support, Cyber, Integrated/Emerging Technologies, Digital Virtual Environment Rapid Fielding Directorate, Technical Support & Operational Analysis, and Joint Tactical Warfare Simulation. The project will provide an upgraded laboratory space including collaborative areas, and testing and integration work areas. An Economic Analysis has been performed and there are no cost savings anticipated. Without the reconfiguration, building 198 VIB will continue to have areas that are poorly arranged and underutilized. This project is part of Lab Revitalization Demonstration Program (LRDP).

The **"Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Industry/Academia Innovation Facility"** is a project for SSC Pacific in FY18. There is no current dedicated facility for industry, academia and government to collaborate in developing leading-edge advances in naval warfighting capabilities. The Command, Control, Communications, Computer, Intelligence and Reconnaissance (C4ISR) Industry/Academia Innovation Facility will provide a framework for building a science, technology, and engineering ecosystem that will inspire leading-edge advances in naval warfighting capabilities by linking government assets with the global research community (i.e. industry, academia). An economic analysis has been performed. Collaboration between industry, academia and government is an important enabler in developing innovative solutions and long-term warfighting capabilities. Outcomes of collaboration include significant cost savings, superior technology advancements, and rapid fielding of products and services to the warfighter. Without this facility, there will be increased costs in facilitating interactions between the global research community, as well as delays in delivering technological advances and a competitive edge to the naval forces. This project is part of Lab Revitalization Demonstration Program (LRDP).

The **"Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) End-to-End Integration and Testing Facility"** is a project for SSC Pacific in FY18. A 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. SSC Pacific requires test bed laboratory space capable of supporting 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. In addition, shipboard mockups are needed to provide training to sailors prior to deployment. This lab would also provide a realistic operational environment to support PEO C4I cyber certification testing. A dedicated laboratory space will also allow re-configuration to support testing for multiple platforms, instead of needing one lab devoted to only one platform; this permits more efficient use of laboratory spaces. This project will consolidate functions now being performed at distant locations requiring substantial travel and per diem expenses on ships at sea. Furthermore, this facility would facilitate rapid technology transition by allowing for testing of developmental and prototype capabilities in-line with currently fielded C4ISR systems. An economic analysis has been performed. Current system-of-systems integration and test activities have already demonstrated cost avoidance by identifying problems prior to system deployment to ships. If not provided, a significant operational cost savings to the fleet will not be realized. There is a high cost incurred through increased down time of ship systems and for substantial travel and per diem costs to perform systems integration work aboard ships, submarines and aircraft at distant locations instead of a controlled laboratory environment. Resolving Casualty Report (CASREP) interoperability problems with similar C4I systems that were upgraded in two aircraft carriers in FY10 cost approximately \$500K to fix since the vessels had left port and were already underway. If C4ISR system interoperability issues are not identified during the development and pre-installation testing to be conducted in this facility, interoperability problems will continue to occur in newly installed systems, resulting in delayed afloat unit deployments or reduced operational capabilities. Resolving these problems requires expensive assist visits or Tiger Team deployments to the units affected. In addition to the impact on current operational systems, the lack of additional space for end-to-end testing will continue to impact technology transition from Space & Technology efforts to the Fleet. 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. This project is part of Lab Revitalization Demonstration Program (LRDP).

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CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$0.000	\$0.000	\$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	\$0.000	\$0.000	\$0.000	
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$0.000	\$0.000	
	2	ADP		\$1.450	\$1.313	-\$0.137	
			Computer Hardware (Production)	\$0.250	\$0.113	-\$0.137	Funding adjusted as projects were reprioritized
			Computer Hardware (Network)	\$1.200	\$1.200	\$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		\$9.954	\$6.943	-\$3.011	
			Replacement	\$1.051	\$0.124	-\$0.927	Funding adjusted as projects were reprioritized
			New Construction	\$8.903	\$6.819	-\$2.084	Funding adjusted as projects were reprioritized
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2016 CIP Program				\$11.404	\$8.256	-\$3.148	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$0.600	\$0.000	-\$0.600	
			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	\$0.600	\$0.000	-\$0.600	Funding adjusted as projects were reprioritized
	2	ADP		\$0.600	\$3.133	\$2.533	
			Computer Hardware (Production)	\$0.000	\$2.533	\$2.533	Funding adjusted as projects were reprioritized
			Computer Hardware (Network)	\$0.600	\$0.600	\$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		\$6.764	\$12.587	\$5.823	
			Replacement	\$3.264	\$5.955	\$2.691	
			New Construction	\$3.500	\$6.632	\$3.132	Funding adjusted as projects were reprioritized
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2017 CIP Program				\$7.964	\$15.720	\$7.756	
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	
			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	\$0.000	\$0.000	\$0.000	
	2	ADP		\$5.300	\$5.300	\$0.000	
			Computer Hardware (Production)	\$2.100	\$2.100	\$0.000	
			Computer Hardware (Network)	\$3.200	\$3.200	\$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		\$13.707	\$13.707	\$0.000	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$13.707	\$13.707	\$0.000	
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2018 CIP Program				\$19.007	\$19.007	\$0.000	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - SPACE AND NAVAL WARFARE SYSTEMS CENTERS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
Part 1			
1. Net Carry-In	1,121.3	1,116.4	1,134.9
2. Revenue	2,278.4	2,349.5	2,437.0
3. New Orders	2,273.5	2,368.0	2,333.7
4. Exclusions:			
Foreign Military Sales	48.8	45.1	51.2
Base Realignment and Closure	(0.4)	-	-
Other Federal Department and Agencies	89.6	99.4	104.4
Non-Federal and Others	31.0	46.6	38.2
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
5. Orders for Carryover Calculation	2,104.5	2,176.9	2,139.9
6. Weighted Average Outlay Rate	47.8%	54.9%	55.7%
7. Carryover Rate	52.2%	45.1%	44.3%
8. Allowable Carryover	1,364.4	1,114.5	1,076.0
Allowable Carryover(First Year)	1,098.5	981.8	948.0
Allowable Carryover (Second Year Procurement-funded Orders)	265.9	132.7	128.0
Part II			
9. Balance of Customer Order at Year End	1,116.4	1,134.9	1,031.6
10. Work-in-progress	-	-	-
11. Exclusions:			
Foreign Military Sales	41.5	40.8	40.1
Base Realignment and Closure	1.1	1.0	0.9
Other Federal Department and Agencies	152.3	141.7	141.8
Non-Federal and Others	27.4	38.1	34.8
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
12. Calculated Actuals Carryover	894.1	913.4	814.1

Some totals may not add due to rounding.

7. Naval Research Laboratory

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NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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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, including a vessel for fire research and a Flight Squadron. 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
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RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
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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 2017 President's Budget:

The FY 2017 budget estimate has been updated to reflect the actual civilian pay raise; an increase in workload mix, revised general inflation estimates and fuel.

The FY 2018 budget estimate includes other changes as a result of the pay raise, inflation/pricing, and investments in research and development as described in the Section 212 of FY 2017 National Defense Authorization Act.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
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Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$881.9	\$845.9	\$884.1
Revenue	\$866.8	\$882.4	\$916.2
Expense	<u>\$866.2</u>	<u>\$906.7</u>	<u>\$927.1</u>
Operating Results	\$0.6	(\$24.3)	(\$10.9)
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	\$0.6	(\$24.3)	(\$10.9)
Other Changes Affecting AOR	\$34.7	\$35.3	\$10.9
Accumulated Operating Results (AOR)	<u>\$35.3</u>	<u>\$11.0</u>	<u>(\$0.0)</u>

Some totals may not add due to rounding.

Revenue and Expense: The changes in orders reflect updated workload projections. The increase in revenue and expense between FY 2017 and FY 2018 reflect updated general purchase inflation and investments in research and development as described in the Section 212 of FY 2017 National Defense Authorization Act.

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$864.8	\$878.6	\$916.2
Disbursements	<u>\$873.3</u>	<u>\$888.7</u>	<u>\$926.9</u>
Net Outlays	<u>\$8.5</u>	<u>\$10.1</u>	<u>\$10.7</u>

Some totals may not add due to rounding.

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

NARRATIVE
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RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
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<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	2,977	3,029	3,029

The change in direct labor hours are estimated based on supporting customer workload and drives increased revenue.

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.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$442.5	\$478.0	\$489.9
Workload (DLHs) (000)	2,977	3,029	3,029
Unit cost (per DLH)	\$148.6	\$157.8	\$161.7

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 2018 unit cost reflects stabilized costs per associated stabilized hours as an expense rate.

NARRATIVE
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RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
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<u>Stabilized / Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$144.04	\$142.79	\$154.46
Change from Prior Year	17.40%	-0.87%	8.17%
Composite Rate Change	9.80%	0.50%	4.75%

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. The composite rate change in FY 2018 reflects adjustments to direct workload and pricing changes.

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	2,517	2,523	2,523
Civilian Workyears (straight time)	2,444	2,478	2,478
Military End Strength	56	58	58
Military Workyears	57	58	58

Civilian Personnel: Civilian strength levels, measured by both end strength and full-time equivalents (FTEs) remain steady in FY 2018.

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 2018.

NARRATIVE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT – NAVAL RESEARCH LABORATORY
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Capital Investment Program (CIP):

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$11.5	\$13.9	\$15.6
Equipment, ADPE / Telecom	\$3.2	\$2.8	\$2.1
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$0.5</u>	<u>\$11.6</u>	<u>\$6.8</u>
Total	<u>\$15.1</u>	<u>\$28.3</u>	<u>\$24.5</u>

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

<u>Carryover Compliance (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$380.6	\$395.7	\$359.2
Allowable Carryover	\$400.6	\$399.7	\$417.2
Calculated Actual Carryover	\$344.4	\$326.1	\$303.1
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$56.2)	(\$73.6)	(\$114.1)

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
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(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
Revenue:			
Gross Sales			
Operations	853.2	862.8	891.7
Capital Surcharges	.0	.0	.0
Capital Investment Recovery	13.5	19.6	24.5
Other Income			
Total Income	866.8	882.4	916.2
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	3.5	3.7	3.8
Civilian Personnel Compensation & Benefits	359.1	365.7	372.9
Travel and Transportation of Personnel	9.6	9.3	11.9
Material & Supplies (Internal Operations)	37.0	54.1	56.6
Equipment	63.4	39.5	41.5
Other Purchases from NWCF	9.5	17.4	17.9
Transportation of Things	.7	1.7	1.8
Capital Investment Recovery	13.5	19.6	24.5
Printing and Reproduction	.1	.1	.1
Advisory and Assistance Services	.0	.0	.0
Rent, Communication, Utilities & Misc Charges	18.4	34.2	34.9
Other Purchased Services	351.5	361.4	361.3
Total Expenses	866.4	906.7	927.1
Work in Process Adjustment	-.1	.0	.0
Comp Work for Activity Retention Adjustment	.0	.0	.0
Cost of Goods Sold	866.2	906.7	927.1
Operating Result	.6	-24.3	-10.9
Adjustments Affecting NOR	.0	.0	.0
Capital Surcharges	.0	.0	.0
Extraordinary Expenses Unmatched	.0	.0	.0
Other Changes Affecting NOR (All Others)	.0	.0	.0
Net Operating Result	.5	-24.3	-10.9
PY AOR	34.8	35.3	10.9
TOTAL AOR	35.3	11.0	.0
Non-Recoverable Adjustments impacting AOR	.0	-.1	.0
AOR for budget purposes	35.3	10.9	.0

Exhibit Fund-14 Revenue and Expenses

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
1. New Orders	881.9	845.9	884.1
a. Orders from DoD Components:	796.0	781.6	817.9
Department of the Navy	516.3	526.2	550.8
O & M, Navy	42.2	36.2	37.4
O & M, Marine Corps	0.3	0.2	0.2
O & M, Navy Reserve	-	-	-
O & M, Marine Corp Reserve	-	-	-
Aircraft Procurement, Navy	1.6	1.7	1.8
Weapons Procurement, Navy	-	-	-
Ammunition Procurement, Navy/MC	-	-	-
Shipbuilding & Conversion, Navy	1.1	1.4	1.5
Other Procurement, Navy	11.5	12.1	12.5
Procurement, Marine Corps	0.2	0.5	0.5
Family Housing, Navy/MC	-	-	-
Research, Dev., Test, & Eval., Navy	459.4	474.1	497.0
Military Construction, Navy	-	-	-
National Defense Sealift Fund	-	-	-
Other Navy Appropriations	-	-	-
Other Marine Corps Appropriations	-	-	-
Department of the Army	8.3	11.2	11.6
Army Operation & Maintenance	2.4	2.5	2.6
Army Res, Dev, Test, Eval	5.5	8.1	8.3
Army Procurement	0.0	-	-
Army Other	0.4	0.6	0.6
Department of the Air Force	144.2	129.0	134.9
Air Force Operation & Maintenance	14.6	8.6	8.9
Air Force Res, Dev, Test, Eval	107.3	100.8	105.7
Air Force Procurement	22.2	19.7	20.3
Air Force Other	-	-	-
DOD Appropriation Accounts	127.2	115.3	120.7
Base Closure & Realignment	-	-	-
Operation & Maintenance Accounts	13.7	11.5	11.9
Res, Dev, Test & Eval Accounts	109.0	98.0	102.8
Procurement Accounts	2.4	3.2	3.3
Defense Emergency Relief Fund	-	-	-
DOD Other	2.0	2.6	2.7
b. Orders from other Fund Activity Groups	8.7	8.6	8.9
c. Total DoD	804.7	790.3	826.7
d. Other Orders:	77.2	55.6	57.3
Other Federal Agencies	62.4	45.3	46.7
Foreign Military Sales	2.1	0.8	0.8
Non Federal Agencies	12.7	9.6	9.9
2. Carry-In Orders	380.6	395.7	359.2
3. Total Gross Orders	1,262.5	1,241.6	1,243.3
a. Funded Carry-Over before Exclusions	395.7	359.2	327.1
4. Revenue(-)	866.8	882.4	916.2
5. End of Year Work-In-Process (-)	0.2	0.2	0.2
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	51.1	32.9	23.7
7. Funded Carryover	344.4	326.1	303.1

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
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2016 Actuals	866.4
 FY 2017 President's Budget:	 797.6
 Estimated Impact in FY 2017 of Actual FY 2016 Experience:	 8.3
Civilian Labor Pricing	8.3
 Pricing Adjustments:	 -0.1
Civilian Personnel	
Fuel Price	-0.1
 Program Changes:	 104.0
Space Systems & Engineering Direct Programs	56.0
Ocean & Atmospheric Science & Technology Direct Programs	20.0
Naval Radar, Optical, & Tactical Electronic Warfare Direct Programs	15.0
Material Science & Component Technology Direct Programs	13.0
 Other Changes:	 -3.0
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	-3.0
 FY 2017 Current Estimate:	 906.7

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
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MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	906.7
Pricing Adjustments:	17.5
Annualization of Prior Year Pay Raises	1.8
Civilian Personnel	1.8
Military Personnel	0.0
FY 2018 Pay Raise	5.5
Civilian Personnel	5.4
Military Personnel	0.0
Fuel Price Changes	0.1
General Purchase Inflation	10.2
Other Price Changes (list)	0.0
Productivity Initiatives and Other Efficiencies:	0.0
Program Changes:	0.0
Other Changes:	2.9
Capital Investment Recovery	4.9
Facilities Sustainment, Restoration & Modernization	-7.4
NISE Section 219 Funding Increase	5.4
FY 2018 Estimate:	927.1

CAPITAL INVESTMENT SUMMARY DEPARTMENT OF THE NAVY RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY FISCAL YEAR (FY) 2018 BUDGET ESTIMATES MAY 2017 (DOLLARS IN MILLIONS)							
Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	25	\$11.489	25	\$13.943	26	\$15.646
	- 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	25	\$11.489	25	\$13.943	26	\$15.646
2	ADPE and Telecom Equipment >= \$.250M	2	\$3.185	7	\$2.806	2	\$2.119
	- Computer Hardware (Production)	2	\$3.185	3	\$1.373	1	\$1.750
	- Computer Hardware (Network)	0	\$0.000	1	\$0.372	0	\$0.000
	- Computer Software (Operating)	0	\$0.000	1	\$0.256	0	\$0.000
	- Telecommunications	0	\$0.000	2	\$0.805	1	\$0.369
	- 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 <= \$2.000M)	1	\$0.465	6	\$11.570	3	\$6.750
	- Replacement Capability	1	\$0.465	0	\$0.000	0	\$0.000
	- New Construction	0	\$0.000	6	\$11.570	3	\$6.750
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	Grand Total	28	\$15.139	38	\$28.319	31	\$24.515
	Total Capital Outlays		\$5.504		\$28.319		\$24.515
	Total Capital Investment Recovery		\$13.542		\$19.559		\$24.515

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development		#001 - Non-ADP Equipment					Naval Research Laboratory		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	\$0	0	0	\$0	0	0	\$0
Material Handling	0	0	\$0	0	0	\$0	0	0	\$0
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	\$0	0	0	\$0	0	0	\$0
Support Equipment	25	460	\$11,489	25	558	\$13,943	26	602	\$15,646
Total	25	460	\$11,489	25	558	\$13,943	26	602	\$15,646
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 2017 is the "W-Band Airborne Testbed," costing more than one million dollars. This investment will support advanced millimeter wave radar, Electronic Protect and Electronic Attack techniques, with complete control of frequency, polarization, and timing necessary for demonstration of advanced techniques. NRL's largest investment in FY 2018 is the "Simulation Radio Test System". This investment will allow for simulations, in a laboratory environments, of real world communications and collections scenarios allowing engineers to introduce delay, noise, multiple reflected copies of a signal, and other degrading effects into a controlled, simulated channel between a radio source and the receiver while mimicking an operational environment.									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development	#002 - ADP Equipment						Naval Research Laboratory		
	FY 2016			FY 2017			FY 2018		
ADP Equipment	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	2	1,593	\$3,185	3	458	\$1,373	1	1,750	\$1,750
Computer Hardware (Network)	0	0	\$0	1	372	\$372	0	0	\$0
Computer Software (Operating System)	0	0	\$0	1	256	\$256	0	0	\$0
Telecommunications	0	0	\$0	2	403	\$805	1	369	\$369
Other Support Equipment	0	0	\$0	0	0	\$0	0	0	\$0
Total	2	1,593	\$3,185	7	401	\$2,806	2	1,060	\$2,119
Justification: Computer Hardware (Production) Several investments in computer hardware (production) are proposed for FY 2017 and FY 2018. In FY 2017, the investments will enable research, development and testing of equipment that allows watch-standers to handle multiple tasks from a single seat, assist in testing the national Earth System Prediction Capability (ESPC), and create a new type of high-bandwidth memory technology. In FY 2018, some of the investments will benefit the following areas: generate high bandwidth vector and narrow pulse modulates signals, utilize the testing of advanced radar techniques and reduce the computation times for highly visible Navy programs. Computer Hardware (Network) In FY 2017, the computer hardware investment will produce a viable and functional network archiving system that will maintain domain resources for management and spacecraft engineering activities. Computer Software (Operating System) In FY 2017, the computer software investment will enhance the system in signal integrity analysis compatible with current circuit board design tools which will allow for reduced manufacturing time and design iterations.									

Telecommunications

Several investments in telecommunications are proposed for FY 2017 and FY 2018. The investments will benefit the following areas: acquire a system that enables the assessment of electronic warfare issues in multi-technology wireless networks, invest in a communications testbed 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) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Research and Development		#004 - Minor Construction (\$250K - \$1M)					Naval Research Laboratory		
Minor Construction	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	1	465	\$465	0	0	\$0	0	0	\$0
New Construction	0	0	\$0	6	1,928	\$11,570	3	2,250	\$6,750
Environmental Capability	0	0	\$0	0	0	\$0	0	0	\$0
Total	1	465	\$465	6	1,928	\$11,570	3	2,250	\$6,750
Justification:									
PROJECTS UNDER \$1M									
During FY 2017, the "Redundant Feeder for Electra Laser Facility - Building 71" project will provide a redundant (parallel) feeder from the building 246 substation. At the present time, building 71 is powered from a single electrical feeder and thus a power failure can cause a significant loss in productivity. Thus a redundant feed will help prevent a loss in productivity.									
The FY 2018 "Backup Generator - Buidling 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 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									
In FY 2017, the "Backup Generator - Building A49 " 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 to potential risk and critical work stoppage.									

Additionally, the "**Truck Inspection Station**" project will provide a truck inspection area outside the primary fence line of NRL to facilitate inspection before trucks can expose the facilities inside NRL to potential threats. The work involves modifying the fence securing the perimeter of NRL, modifying the existing hard surface to include bordering curb and guttering, modifying the existing perimeter lighting and security measures, extending the existing storm water system, and other required support work. A truck inspection area beyond the primary security perimeter will reduce the potential threats to NRL facilities.

The FY 2018, "**Code 8150 Build-out of Parking Garage - Building 260**" project will convert space (approximately 7,200 square feet) in the garage under Building 260 from parking to office and lab space for Code 8150. 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, the "**Redundant Feeder - Building 256**" project will provide a redundant (parallel) feeder from Building 246 substation. . This redunant 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 redunant feeder will ensure that productivity is not compromised.

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$11.942	\$11.489	-\$0.453	
			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	\$11.942	\$11.489	-\$0.453	Funding adjusted as projects were reprioritized
	2	ADP		\$3.158	\$3.185	\$0.027	
			Computer Hardware (Production)	\$3.158	\$3.185	\$0.027	Funding adjusted as projects were reprioritized
			Computer Hardware (Network)	\$0.000	\$0.000	\$0.000	
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$0.000	\$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		\$8.000	\$0.465	-\$7.535	
			Replacement	\$8.000	\$0.465	-\$7.535	Funding adjusted as projects were reprioritized
			New Construction	\$0.000	\$0.000	\$0.000	
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2016 CIP Program				\$23.100	\$15.139	-\$7.961	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$13.053	\$13.943	\$0.890	
			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	\$13.053	\$13.943	\$0.890	Funding adjusted as projects were reprioritized
	2	ADP		\$2.506	\$2.806	\$0.300	
			Computer Hardware (Production)	\$1.373	\$1.373	\$0.000	
			Computer Hardware (Network)	\$0.372	\$0.372	\$0.000	
			Computer Software (Operating)	\$0.256	\$0.256	\$0.000	
			Telecommunications	\$0.505	\$0.805	\$0.300	Funding 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		\$4.000	\$11.570	\$7.570	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$4.000	\$11.570	\$7.570	Funding adjusted as projects were reprioritized
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2017 CIP Program				\$19.559	\$28.319	\$8.760	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$15.646	\$15.646	\$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	\$0.000	\$0.000	\$0.000	
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$15.646	\$15.646	\$0.000	
	2	ADP		\$2.119	\$2.119	\$0.000	
			Computer Hardware (Production)	\$1.750	\$1.750	\$0.000	
			Computer Hardware (Network)	\$0.000	\$0.000	\$0.000	
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$0.369	\$0.369	\$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		\$6.750	\$6.750	\$0.000	
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$6.750	\$6.750	\$0.000	
			Environmental Capability	\$0.000	\$0.000	\$0.000	
TOTAL FY 2018 CIP Program				\$24.515	\$24.515	\$0.000	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT - NAVAL RESEARCH LABORATORY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Part 1			
1. Net Carry-In	380.6	395.7	359.2
2. Revenue	866.8	882.4	916.2
3. New Orders	881.9	845.9	884.1
4. Exclusions:			
Foreign Military Sales	2.1	.8	.8
Base Realignment and Closure	.0	.0	.0
Other Federal Department and Agencies	62.4	45.3	46.7
Non-Federal and Others	12.7	9.6	9.9
Institutional Major Range & Test Facility Base	.0	.0	.0
OUSD(C) Approved Carryover Waiver	.0	.0	.0
5. Orders for Carryover Calculation	804.7	790.3	826.7
6. Weighted Average Outlay Rate	51.4%	50.8%	50.8%
7. Carryover Rate	48.6%	49.2%	49.2%
8. Allowable Carryover	400.6	399.7	417.2
Allowable Carryover(First Year)	391.1	388.8	406.8
Allowable Carryover (Second Year Procurement-funded Orders)	9.5	10.9	10.4
Part II			
9. Balance of Customer Order at Year End	395.7	359.2	327.1
10. Work-in-progress	.2	.2	.2
11. Exclusions:			
Foreign Military Sales	1.8	.7	.4
Base Realignment and Closure	.0	.0	.0
Other Federal Department and Agencies	42.2	27.3	19.5
Non-Federal and Others	7.1	4.8	3.9
Institutional Major Range & Test Facility Base	.0	.0	.0
OUSD(C) Approved Carryover Waiver	.0	.0	.0
12. Calculated Actuals Carryover	344.4	326.1	303.1

Some totals may not add due to rounding.

8. Military Sealift Command

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NARRATIVE
DEPARTMENT OF THE NAVY
TRANSPORTATION – MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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:

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 US 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.
5. Expeditionary Fast Transport – Navy (EPF): 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. This program also contains the HST USNS GUAM and HST-2 USNS PUERTO RICO; however, they will be moved to the APF-N program beginning in FY17. In FY18, the EPF program will be consolidated with the SSS program.

**NARRATIVE
DEPARTMENT OF THE NAVY
TRANSPORTATION – MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017**

Significant Changes Since the FY 2017 President's Budget:

FY 2016 to FY 2017:

CLF – The USNS T-AOE 7 RAINIER will not be operational in FY 2017.

SMS – USNS DOMINATOR's steaming days will be reduced by 45 days. T-AGOS will reduce 75 underway days (15 days per five ships) as well as a 10% reduction in maintenance and readiness funds. T-AGS will reduce 270 underway days (45 days per six ships) and defer survey requirements to future years. These actions were required for the DON to comply with fiscal constraints. The USNS Maury (T-AG 66) will operate a full year as per diem.

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

SSS – The USNS SAFEGUARD (T-ARS 50) and the USNS NAVAJO (T-ATF 169) will deactivate in FY 2017. The T-AH Humanitarian Mission will be cancelled in FY 2017 and the USNS COMFORT (T-AH 20) crew will be reduced from Reduced Operating Schedule (ROS)-5 in FY16 to a ROS-45 in FY 2017. The USS EMORY S. LAND and USS FRANK CABLE will reduce 37 steaming days. These actions were required for the DON to comply with fiscal constraints.

EPF – The USNS CARSON CITY (EPF-7) will operate a full year as per diem and the USNS YUMA (EPF-8) will operate a little less than full year as per diem. Pre-delivery costs will be recognized for USNS BISMARCK (EPF-9) and USNS BURLINGTON (EPF-10) and Post Shakedown Availability (PSA) costs will be recognized for USNS CARSON CITY (EPF-7) and USNS YUMA (EPF-8) in FY 2017. EPF 1 – EPF 8 will decrease underway days by 274 (34 days per 8 ships and 2 days for EPF-9). These actions were required for the DON to comply with fiscal constraints. In support of the modernization in combat capability for worldwide EPF missions, the program received additional reimbursable funding for Adaptive Force Packages (AFP).

FY 2017 to FY 2018:

CLF – In support of Cybersecurity, the program received additional reimbursable funding to accomplish IT requirements.

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

APF-N – No major changes.

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TRANSPORTATION – MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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SSS / EPF– The USNS COMFORT (T-AH 20) crew will change from ROS-45 to ROS-5 in FY 2018. 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. The H. WILLIAMS (ESB-4) will operate a little less than full year as per diem in FY 2018. The USNS YUMA (EPF-8) and USNS BISMARCK (EPF-9) will operate a full year as per diem and the USNS BURLINGTON (EPF-10) will operate a little less than full year as per diem. The EPF-11 will be recognized as per diem late in FY 2018. Pre-delivery costs will be recognized for USNS BURLINGTON (EPF-10) and EPF-11 in FY 2018. In addition Post Shakedown (PSA) costs will be recognized for USNS BISMARCK (EPF-9) and USNS BURLINGTON (EPF-10) in FY 2018.

Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Revenue	\$3,159.4	\$3,002.2	\$2,633.3
Expense	<u>\$2,927.4</u>	<u>\$2,693.3</u>	<u>\$2,831.8</u>
Operating Results	\$232.0	\$308.9	(\$198.5)
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	\$232.0	\$308.9	(\$198.5)
Other Changes Affecting AOR	\$0.0	(\$335.8)	\$0.0
Accumulated Operating Results (AOR)	<u>\$225.4</u>	<u>\$198.5</u>	<u>\$0.0</u>

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 2017 reflects adjustments to AOR to maintain operating cash associated with budgetary resources required for projected outlays.

Net Operating Result (NOR): The FY 2017 President’s Budget reflected a NOR of \$269.6 vice the current estimate of \$308.9 for FY 2017. 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 2018 rates.

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$3,068.2	\$3,002.2	\$2,633.3
Disbursements	<u>\$2,854.5</u>	<u>\$2,690.9</u>	<u>\$2,831.0</u>
Outlays	<u>\$ 213.7</u>	<u>\$311.3</u>	<u>\$- 197.7</u>

Some totals may not add due to rounding

NARRATIVE
DEPARTMENT OF THE NAVY
TRANSPORTATION – MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

Collections: FY 2016 actuals, FY 2017 and FY 2018 reflect expected revenue based on current estimates adjusted for changes in accounts receivable.

Disbursements: FY 2016 actuals, FY 2017 and FY 2018 represent budgeted expenses and Capital Investment Program (CIP) outlays adjusted for changes in accounts payable.

Workload:

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
CLF	10,934	10,585	10,585
SMS	7,913	8,030	8,395
APF-N	5,856	5,840	5,840
SSS	4,392	4,745	8,182
EPF	2,190	2,920	

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 - The decrease in FY 2017 is due to the USNS RAINIER (T-AOE-7) will not be in operation. In addition, FY 2017 and FY 2018 ship workload days decreased due to FY 2016 was a leap year, 366 ship days vice the normal 365 ship days.

SMS – The increase in FY 2017 is due to a full year of operational costs being recognized for USNS MAURY (T-AG 66). The increase in FY 2018 is due to full year of operational costs being recognized for the Charter Ship SBX-1.

APF-N – The decrease in ship workdays in FY 2017 and FY 2018 is due to FY 2016 was a leap year, 366 ship days vice the normal 365 ship days.

SSS - The increase in FY 2017 is due to full year of operational costs for USNS CATAWBA (T-ATF 168). The increase in FY 2017 is due to the USNS CATAWBA (T-ATF 168) operating as per diem vice reimbursable. The increase in FY 2018 is for partial year funding for H. WILLIAMS (ESB-4) 214 days. In FY 2018, MSC consolidated the SSS and EPF programs. In FY 2018 more than half a year funding will be recognized for USNS BURLINGTON (EPF-10) 273 days and partial funding for EPF-11 of 30 days.

EPF – The increase in FY 2017 is due to full year operational costs for USNS YUMA (EPF-8) and partial year operational costs for the USNS BISMARCK (EPF-9) 92 days. For FY18, the EPF program will be consolidated with the SSS.

NARRATIVE
DEPARTMENT OF THE NAVY
TRANSPORTATION – MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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<u>Reimbursable Orders (\$ Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	\$3,024.7	\$3,002.2	\$2,633.3

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 2018.

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	20,616	17,595	17,507

The decrease in FY 2018 is due to the deactivation of USNS PONCE.

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:

<u>Performance Measure</u>	<u>Goal</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Ship Availability	95%	95%	95%	95%

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
CLF	\$124,917	\$120,231	\$124,402
SMS	\$34,713	\$35,356	\$39,001
APF-N	\$60,944	\$62,854	\$66,030
SSS	\$85,957	\$81,164	\$72,088
EPF	\$52,518	\$62,485	

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.

Narrative

NARRATIVE
DEPARTMENT OF THE NAVY
TRANSPORTATION – MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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<u>Performance Rate Change From Prior Year</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
CLF	-0.1%	-3.4%	-4.0%
SMS	10.1%	-4.3%	-3.8%
APF-N	2.3%	77.4%	-44.9%
SSS	54.3%	-28.0%	-18.5%
EPF	0.0%	-30.0%	-100.0%

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.

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	7,022	6,755	6,676
Civilian Workyears (straight time)	9,369	8,652	8,709
Military End Strength	160	165	165
Military Workyears	162	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):

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$0.0	\$0.0	\$0.0
Equipment, ADPE / Telecom	\$6.1	\$9.4	\$8.0
Software Development	\$1.5	\$3.6	\$0.0
Minor Construction	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$1.9</u>
Total	<u><u>\$7.6</u></u>	<u><u>\$13.0</u></u>	<u><u>\$9.9</u></u>

Some totals may not add due to rounding.

REVENUE AND EXPENSES
DEPARTMENT OF THE NAVY
TRANSPORTATION - MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Revenue:			
Gross Sales			
Operations	3,150.3	2,990.1	2,623.1
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	9.2	12.2	10.2
Other Income			
Total Income	3,159.4	3,002.2	2,633.3
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	16.0	15.3	15.5
Civilian Personnel Compensation & Benefits	856.7	813.9	814.4
Travel and Transportation of Personnel	36.4	35.6	36.6
Material & Supplies (Internal Operations)	485.2	431.2	489.8
Equipment	102.5	98.4	101.1
Other Purchases from NWCF	3.4	1.7	2.1
Transportation of Things	13.1	10.0	11.2
Capital Investment Recovery	9.2	12.2	10.2
Printing and Reproduction	0.2	0.3	0.4
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	457.9	362.1	397.8
Other Purchased Services	946.9	912.7	952.8
Total Expenses	2,927.4	2,693.3	2,831.8
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	2,927.4	2,693.3	2,831.8
Operating Result	232.0	308.9	-198.5
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	232.0	308.9	-198.5
PY AOR	-6.6	225.4	198.5
TOTAL AOR	225.4	198.5	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	225.4	198.5	0.0

Exhibit Fund-14 Revenue and Expenses

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
TRANSPORTATION - MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	3,024.7	3,002.2	2,633.3
a. Orders from DoD Components:	3,017.5	2,994.9	2,625.9
Department of the Navy	2,948.5	2,933.0	2,538.8
O & M, Navy	2,922.3	2,897.7	2,503.7
O & M, Marine Corps	26.2	25.2	26.5
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	0.0	10.2	8.6
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	38.3	29.6	20
Air Force Operation & Maintenance	38.3	29.6	20
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	30.6	32.4	67.1
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	30.6	32.4	30.7
Res, Dev, Test & Eval Accounts	0.0	0.0	36.4
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	7.2	7.3	7.4
c. Total DoD	3,024.7	3,002.2	2,633.3
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	414.8	280	280
3. Total Gross Orders	3,439.4	3,282.2	2,913.3
a. Funded Carry-Over before Exclusions	280.0	280.0	280.0
4. Revenue(-)	3,159.4	3,002.2	2,633.3
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	4.8	4.8	4.8
7. Funded Carryover	275.2	275.2	275.2

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
TRANSPORTATION- MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2016 Estimated Actuals	2,927.4
 FY 2017 President's Budget:	 2,702.8
 Pricing Adjustments:	 -35.4
Civilian Personnel	1.9
Fuel Price	-37.3
General Inflation	0.0
 Program Changes:	 25.9
Deactivation of T-ARS Grapple	1.3
Increase to T-AH Mercy ROS-5 Reimbursable for MV-22 modifications	8.5
Increase in Various M&R ROH Requirements	11.4
Decrease in Mt. Whitney Reimbursable	-17.3
Decrease T-AKE Fuel Barrels	-4.6
Decrease T-AOE Fuel Barrels	-1.1
Reduce Puerto Rico layup costs	-2.0
Sealift Support Readiness	10.0
EPF delay in delivery of BISMARK and YUMA	-5.3
EPF Adaptive Force Packages	35.0
Reduction in G&A Personnel	-10.0
 Other Changes:	 0.0
Depreciation	0.0
Facilities Sustainment, Restoration & Modernization	0.0
 FY 2017 Current Estimate:	 2,693.3

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
TRANSPORTATION- MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	2,693.3
Pricing Adjustments:	72.5
Annualization of Prior Year Pay Raises	7.4
Civilian Personnel	7.3
Military Personnel	0.1
FY 2017 Pay Raise	4.1
Civilian Personnel	3.9
Military Personnel	0.2
Fuel Price Changes	35.1
General Purchase Inflation	25.9
Productivity Initiatives and Other Efficiencies:	0.0
Program Changes:	60.2
Increase in M&R regular overhaul requirements due to schedule changes	17.9
Reduced fuel barrels and steaming days for the EPF	-31.0
Lease 1 Commercial Salvage/Tow, Reimbursable	10.9
SBX-1 Charter Ship will operate a full year as per diem	34.2
Restore T-AH Comfort from ROS-45 to ROS-5	2.1
EPF-11 Pre-Delivery and Post Delivery requirements	2.6
Increase T-AGOS cost due to new contract rate	2.0
EPF Adaptive Force Packages	1.0
MT Whitney reduce ESLP cost	-8.3
ESB-4 H WILLIAMS Pre-Delivery and Post Delivery requirements	28.7
MSC Cybersecurity Requirement	18.0
Other Changes:	5.8
Depreciation	-2.0
Facilities Sustainment, Restoration & Modernization	0.0
Indirect Costs	0.0
G&A Costs	7.8
FY 2018 Estimate:	2,831.8

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
TRANSPORTATION- MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

Line #	Description	FY 2016		FY 2017		FY 2018	
		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	0	\$6.153	0	\$9.437	0	\$8.000
	- Computer Hardware (Production)	0	\$6.153	0	\$9.437	0	\$8.000
	- 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	\$1.500	0	\$3.550	0	\$0.000
	- Internally Developed	0	\$1.500	0	\$3.550	0	\$0.000
	- Externally Developed	0	\$0.000	0	\$0.000	0	\$0.000
4	Minor Construction (>= \$.250M and <= \$2.000M)	0	\$0.000	0	\$0.000	0	\$1.894
	- Replacement Capability	0	\$0.000	0	\$0.000	0	\$0.918
	- New Construction	0	\$0.000	0	\$0.000	0	\$0.976
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	Grand Total	0	\$7.653	0	\$12.987	0	\$9.894
	Total Capital Outlays		\$4.400		\$9.744		\$9.399
	Total Capital Investment Recovery		\$9.157		\$12.180		\$10.120

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
TRANSPORTATION		#002 - ADP Equipment					Military Sealift Command		
ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	2	3,077	\$6,153	2	4,719	\$9,437	1	8,000	\$8,000
Computer Hardware (Network)									
Computer Software (Operating System)									
Telecommunications									
Other Support Equipment									
Total	2	3,077	\$6,153	2	4,719	\$9,437	1	8,000	\$8,000
Justification: <u>FY16, FY17, FY18</u> Consolidated Afloat Network Enterprise Services (CANES) The above 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. <u>FY16, FY17</u> Shipboard Management Information Systems "The above represents MSC requirements to upgrade hardware for unclassified and classified LANS at all ships and ANOC. Non Windows 7 compliant systems will be categorized as a CAT I vulnerability that can impact ship's ability to obtain operational networks ATO. " The amount of equipment that is currently supported by this effort has steadily increased and new equipment demands in order to combat external threats have also increased. Information Assurance findings alone dictate the wholesale replacement of network switches and accelerators in the fleet, placing a substantial burden on the current budget that will require unsecure equipment to remain in the fleet if budget is not increased to accomodate increased demands for new equipment.									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
TRANSPORTATION	#003 - Software Development						Military Sealift Command		
Software	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	1	1,500	\$1,500	1	3,550	\$3,550			
Externally Developed									
Total	1	1,500	\$1,500	1	3,550	\$3,550			
Justification:									
<u>FY16</u> IS Portal Development: Various modules integrate existing worldwide procurement system with developing/deploying financial sytem which will ensure validation of accounting data at time of origination. FY15 IS Portal was obligated.									
<u>FY16</u> Information System: IS Portal: This is a standards based web application that will seamlessly integrate shipboard and shore-side information technology functions									
<u>FY16</u> FMS (Financial Management System): This is a DOD/DFAS migratory finance and accounting system. It is consistent wi the requirements of the Financial Integrity Act, Anti-Deficiency Act, Joint Financial Management Improvement Program (JMIP,) and the Chief Financial Officer (CFO) Act. The upgrade will provde various improvements such as the integration of budget system with other MSC business systems. Software addresses remediation of DOD IG audit findings. FY15 FMS funding was obligated.									
<u>FY16, FY17</u> MSC HRMS (Human Resources Management System) MSC has consolidated its CIVMAR personnel functions at the Afloat Personnel Management Center (APMC). This funding will satisfy the requirement to migrate to a paperless environment - i.e. total automation of the AP process, automated workflow and documentation management utilizing Oracle Human Resource (HR) and Payroll. Implementation of HR also will provide the ability to integrate with MSC's corporate data environment. FY17 reduction of \$400.									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)				MAY 2017						
TRANSPORTATION		#004 - Minor Construction (\$250K - \$750K)					Military Sealift Command			
Minor Construction		FY 2016			FY 2017			FY 2018		
		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement								1	918	\$918
New Construction								1	976	\$976
Environmental Capability										
Total								2	947	\$1,894
Justification:										
FY18										
BLDG. R52 Addition (new construction)										
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									
BLDG. N19 HVAC Repair, Electrical Upgrade, Bathroom Upgrade (Replacement)										
This is a complete overhaul on an existing building assumed by MSC for the Norfolk HQ consolidation effort. Funding will support Replacement of six (6) Water Supplied Heat Pumps (WSHP), repair thirty (30) WSHP, replace one (1) make up air return unit. Installation of an additional six (6) commodes, four (4) urinals, six (6) sinks on the second deck of the building. Upgrades to the electrical systems to accommodate 220 personnel (load testing required) over existing building capacity of 150.										
Design	45,000									
PCAS	72,000									
SIOH	38,000									
Direct Costs	13,000									
Construction	500,000 (Bathroom/Electrical)									
Repair	250,000 (HVAC)									

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
TRANSPORTATION- MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$0.000	\$0.000	\$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	\$0.000	\$0.000	\$0.000	
			Medical Equipment	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$0.000	\$0.000	
	2	ADP		\$6.153	\$6.153	\$0.000	
			Computer Hardware (Production)	\$6.153	\$6.153	\$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		\$1.500	\$1.500	\$0.000	
			Internally Developed	\$1.500	\$1.500	\$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 2016 CIP Program				\$7.653	\$7.653	\$0.000	
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	
			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	\$0.000	\$0.000	\$0.000	
	2	ADP		\$9.437	\$9.437	\$0.000	
			Computer Hardware (Production)	\$9.437	\$9.437	\$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		\$3.550	\$3.550	\$0.000	
			Internally Developed	\$3.550	\$3.550	\$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				\$12.987	\$12.987	\$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		
			Material Handling	\$0.000	\$0.000		
			Installation Security	\$0.000	\$0.000		
			Quality Control/Testing	\$0.000	\$0.000		
			Medical Equipment	\$0.000	\$0.000		
			Machinery	\$0.000	\$0.000		
			Support Equipment	\$0.000	\$0.000		
	2	ADP		\$8.000	\$8.000	\$0.000	
			Computer Hardware (Production)	\$8.000	\$8.000		
			Computer Hardware (Network)	\$0.000	\$0.000		
			Computer Software (Operating)	\$0.000	\$0.000		
			Telecommunications	\$0.000	\$0.000		
			Other Support Equipment	\$0.000	\$0.000		
	3	Software		\$0.000	\$0.000	\$0.000	
			Internally Developed	\$0.000	\$0.000		
			Externally Developed	\$0.000	\$0.000		
	4	Minor Construction		\$1.894	\$1.894	\$0.000	
			Replacement	\$0.918	\$0.918		
			New Construction	\$0.976	\$0.976		
			Environmental Capability	\$0.000	\$0.000		
TOTAL FY 2018 CIP Program				\$9.894	\$9.894	\$0.000	

**CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
TRANSPORTATION - MILITARY SEALIFT COMMAND
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Part 1			
1. Net Carry-In	414.8	280.0	280.0
2. Revenue	3,159.4	3,002.2	2,633.3
3. New Orders	3,024.7	3,002.2	2,633.3
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	3,024.7	3,002.2	2,633.3
6. Weighted Average Outlay Rate	71.3%	71.1%	70.7%
7. Carryover Rate	28.7%	28.9%	29.3%
8. Allowable Carryover	868.8	867.6	775.4
Allowable Carryover(First Year)	868.1	867.6	771.6
Allowable Carryover (Second Year Procurement-funded Orders)	0.7	0.0	3.8
Part II			
9. Balance of Customer Order at Year End	280.0	280.0	280.0
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	275.2	275.2	275.2

Some totals may not add due to rounding.

9. Facilities Engineering Commands

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NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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:

<u>Activity</u>	<u>Location</u>
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 67% of the Base Support budget and higher purchased utility costs continue to impact the cost of operations. In order to mitigate these higher 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 fourteen Restoration and Modernization (RMe) projects in FY 2018. These projects primarily involve replacement or upgrades to utility distribution systems that will reduce or eliminate line loss and provide for more efficient operations. A few RMe projects included in FY 2018:

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

- Decentralize Compressed Air Distribution System at Naval Submarine Base New London by replacement of air compressors.
- Replacement of two chillers in central utility plant at Bethesda with energy efficiency units.
- Replacement of under and above ground Steam and Condensate Piping at Naval Submarine Base (NAVSUBASE) New London.
- Reparation of Steam and Condensate lines at Naval Shipyard Portsmouth and replacement of degraded components with new, properly insulated piping.
- Replacement of failed underground and above ground steam lines with above ground piping at Naval Support Station Norfolk.

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.

Base Support Vehicles and Equipment (BSVE): Budgeted initiatives to standardize and lower vehicles and equipment operating costs include:

- Central management of BSVE NWCF rates and recapitalization
- Management of BSVE 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

NARRATIVE
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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

Facility Support Contract Management and Facility Services (FMFS): The cost of facility sustainment, utility, and BSVE 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, BSVE 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 2017 President's Budget:

Civilian labor estimates in FY 2017 are higher than previously budgeted due to recent successes in filling positions vacated during the hiring freeze and sequestration. This has allowed work to be restored to in-house performance in those instances where it had been diverted to contractor.

Economic Adjustments increased cost by \$2.1M, and a decrease in the Defense Energy Support Center (DESC) fuel rates reduced costs by \$7.7M. The fuel cost reduction is reflected as non-recoverable Accumulated Operating Results (AOR) for FY 2017.

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Productivity Initiatives and Other Efficiencies:

The FY 2018 budget reflects cost reductions made possible by a baseline review of units sold. This review reflects a \$5.6M reduction in Utilities and Maintenance and Repair commodities.

Additional efficiencies/initiatives include:

Decentralization of Steam Operations at FEC Southwest -\$7.8M

Privatization of Electricity at Sigsbee Annex PWD Key West FEC Southeast - \$2.7M

Savings for Prior Year Energy Restoration & Modernization (RM e) Efficiency projects -\$4.9M

Transfer of Rail Operation to U.S. Army at PWD Crane FEC Mid-Lant -\$2.4M

Removal of Environmental Lab Services at FEC Marianas from NWCF -\$4M

Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$3,115.3	\$2,996.6	\$2,984.2
Revenue	\$3,118.0	\$2,963.1	\$2,973.4
Expense	<u>\$2,996.6</u>	<u>\$3,042.6</u>	<u>\$3,183.3</u>
Operating Results	\$121.3	(\$79.4)	(\$209.9)
Other Changes Affecting NOR	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	\$121.3	(\$79.4)	(\$209.9)
Other Changes Affecting AOR	\$10.7	\$7.7	\$0.0
Accumulated Operating Results (AOR)	<u>\$297.0</u>	<u>\$209.9</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Revenue and Expense: The downward profile in orders between FY 2017 and FY 2018 is primarily due to initiatives reducing energy consumption. The FY 2017 to FY 2018 increase in cost is attributable to inflation, increase in sustainment, and increased cost due to the change in the FY 2018 Budget Exchange Rate for the Yen.

<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$3,037.2	\$2,956.2	\$2,977.3
Disbursements	<u>\$2,967.1</u>	<u>\$2,941.9</u>	<u>\$3,125.8</u>
Outlays	<u>(\$70.14)</u>	<u>(\$14.30)</u>	<u>\$148.52</u>

Some totals may not add due to rounding.

Collections: 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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Disbursements: FY 2016 reflects actual execution, and FY 2017 and FY 2018 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:

<u>Costs Subject to Foreign Currency (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Costs to be Paid in EUROS	\$69.66	\$65.95	\$64.26
Costs to be Paid in YEN	<u>\$181.75</u>	<u>\$176.83</u>	<u>\$206.26</u>
Total Costs to be Paid in Foreign Currency	<u>\$251.41</u>	<u>\$242.78</u>	<u>\$270.52</u>

Some totals may not add due to rounding.

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	13,043	12,664	12,578

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 2017 to FY 2018 due to the transfer of 13 ES/WY/Direct Labor hours - Transfer of Rail Operation to U.S. Army at PWD Crane FEC Mid-Lant and decrease in the budgeted direct labor Over Time (OT) in FY18.

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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 2016	UNIT COST FY 2017	UNIT COST FY 2018
<u>UTILITY SERVICES</u>				
ELECTRICITY	MWH	138.89	167.04	179.29
POTABLE WATER	KGAL	10.97	9.51	10.36
SALT/RIVER WATER	KGAL	1.13	1.32	1.61
STEAM	MBTU	45.46	46.06	48.63
SEWAGE	KGAL	11.57	10.78	11.25
NATURAL GAS	MBTU	6.38	10.82	10.23
COMPRESSED AIR	KCF	1.65	2.36	2.46
<u>SANITATION SERVICES</u>				
REFUSE COLL & DISPOSAL I	CUYD	15.88	16.72	21.70
REFUSE COLL & DISPOSAL II	TONS	418.74	368.03	381.98
PEST CONTROL	HOURS	55.90	59.80	61.50
HAZ WASTE I	GAL	2.15	1.92	1.96
HAZ WASTE II	LBS	1.54	1.82	1.77
INDUST WASTE	KGAL	94.80	71.12	72.85
ENVIRONMENTAL ENG	HOURS	95.69	115.27	117.71
ENVIRONMENTAL LAB	TEST	64.65	58.78	56.24
<u>TRANSPORTATION SERVICES</u>				
EQUIP RENTAL	HOURS	5.46	5.35	3.61
VEHICLE OPS	HOURS	62.32	68.76	68.43
VEHICLE MAINTENANCE	SRO	144.94	176.66	180.44
MAINTENANCE & REPAIR	DLH	79.99	79.03	84.39

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

Narrative

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

PRODUCT/SERVICE	UNIT OF MEASURE	UNITS FY 2016	UNITS FY 2017	UNITS FY 2018
<u>UTILITY SERVICES</u>				
ELECTRICITY	MWH	7,171,710	7,221,967	7,194,834
POTABLE WATER	KGAL	22,272,332	22,541,909	22,227,789
SALT/RIVER WATER	KGAL	7,936,126	7,768,143	7,792,654
STEAM	MBTU	5,592,649	6,178,024	5,938,545
SEWAGE	KGAL	16,699,509	16,396,423	16,751,316
NATURAL GAS	MBTU	3,757,166	4,082,317	4,045,904
COMPRESSED AIR	KCF	17,771,457	12,746,697	12,339,261
<u>SANITATION SERVICES</u>				
REFUSE COLL & DISPOSAL I	CUYD	774,742	781,974	799,974
REFUSE COLL & DISPOSAL II	TONS	30,823	30,697	29,547
PEST CONTROL	HOURS	75,776	66,844	67,889
HAZ WASTE I	GAL	31,620	95,000	72,000
HAZ WASTE II	LBS	21,416,247	17,914,496	18,204,181
INDUST WASTE	KGAL	221,689	227,367	227,367
ENVIRONMENTAL ENG	HOURS	37,821	37,358	37,358
ENVIRONMENTAL LAB	TEST	95,646	99,525	98,832
<u>TRANSPORTATION SERVICES</u>				
EQUIP RENTAL	HOURS	38,720,923	38,139,819	57,559,019
VEHICLE OPS	HOURS	1,042,610	917,542	955,137
VEHICLE MAINTENANCE	SRO	93,693	83,442	83,442
MAINTENANCE & REPAIR	DLH	5,552,142	5,636,112	5,389,938

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	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
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<u>Stabilized/Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017*</u>	<u>FY 2018*</u>
Composite Rate	-0.34%	-4.33%	0.35%
Utilities	3.51%	-6.05%	-2.07%
Sanitation Services and Other Base Support	-8.38%	-0.77%	5.08%

**Sanitation realigned to Other Base Support in FY 2017*

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.

<u>Performance Measures:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Emergency Work Response Time-Schedule Adherence	90.0%	90.0%	90.0%
Service/Minor/Specific Work Completion Date-Schedule Adherence	90.0%	90.0%	90.0%

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	9,564	9,435	9,422
Civilian Workyears (straight time)	9,370	9,318	9,305
Military End Strength	78	78	78
Military Workyears	59	78	78

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.

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Military Personnel: Military end strength remains stable.

Capital Investment Program (CIP): The Capital Investment Program allows the NWCF to achieve its mission by reinvesting in equipment and facilities. Included in the FEC capital budget are the following types of assets: non- automated data processing equipment (ADPE) and minor construction. FEC Minor construction projects represent the full range of public works facilities requirements for transportation, utilities, storage, and maintenance. Projects budgeted are for minor construction, expansion, or improvement of a complete and useable building, structure, or other real property. Generally, FEC projects have a payback on the initial investment of 5 years or less. The proposed budget is essential to providing planned cost control and service reliability of the FEC plant account. Projects include but are not limited to: Constructing Emergency Generators for Sewage Lift Stations; Upgrading Electrical Power Transformers; and Installing Water Lines.

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADP / Telecom	\$15.3	\$7.9	\$9.2
Equipment, ADPE / Telecom	\$0.0	\$0.0	\$0.0
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$11.3</u>	<u>\$7.4</u>	<u>\$6.6</u>
Total CIP Authority	<u><u>\$26.5</u></u>	<u><u>\$15.3</u></u>	<u><u>\$15.8</u></u>

Some totals may not add due to rounding.

<u>Carryover Compliance (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$210.9	\$208.2	\$241.7
Allowable Carryover	\$831.1	\$811.2	\$802.3
Calculated Actual Carryover	\$183.4	\$210.0	\$222.2
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$647.7)	(\$601.2)	(\$580.1)

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 - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Revenue:			
Gross Sales			
Operations	3,093.2	2,947.8	2,957.8
Capital Surcharges	10.7	-	-
Capital Investment Recovery	14.0	15.4	15.6
Other Income			
Total Income	3,118.0	2,963.1	2,973.4
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	9.9	9.6	9.6
Civilian Personnel Compensation & Benefits	767.4	769.3	781.9
Travel and Transportation of Personnel	8.1	6.7	6.7
Material & Supplies (Internal Operations)	280.2	280.9	278.5
Equipment	66.6	69.5	68.2
Other Purchases from NWCF	39.5	28.8	22.9
Transportation of Things	1.6	1.5	1.6
Capital Investment Recovery	14.0	15.4	15.6
Printing and Reproduction	0.8	1.3	1.3
Advisory and Assistance Services	5.8	0.2	0.1
Rent, Communication, Utilities & Misc Charges	982.5	1,193.6	1,221.1
Other Purchased Services	820.4	665.7	775.7
Total Expenses	2,996.6	3,042.6	3,183.3
Work in Process Adjustment	-	-	-
Comp Work for Activity Retention Adjustment	-	-	-
Cost of Goods Sold	2,996.6	3,042.6	3,183.3
Operating Result	121.3	(79.4)	(209.9)
Adjustments Affecting NOR	(10.7)	-	-
Capital Surcharges	(10.7)	-	-
Extraordinary Expenses Unmatched	-	-	-
Other Changes Affecting NOR (All Others)	(0.0)	-	-
Net Operating Result	110.6	(79.4)	(209.9)
PY AOR	186.4	297.0	209.9
TOTAL AOR	297.0	217.6	-
Non-Recoverable Adjustments impacting AOR	-	(7.7)	-
AOR for budget purposes	297.0	209.9	-

Exhibit Fund-14 Revenue and Expenses

SOURCES OF NEW ORDERS & REVENUE
DEPARTMENT OF THE NAVY
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MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
1. New Orders	3,115.3	2,996.6	2,984.2
a. Orders from DoD Components:	2,332.4	2,269.2	2,264.1
Department of the Navy	2,100.2	2,012.5	2,025.4
O & M, Navy	1,961.4	1,854.1	1,865.8
O & M, Marine Corps	35.8	46.8	45.9
O & M, Navy Reserve	20.0	25.2	24.4
O & M, Marine Corp Reserve	2.2	3.6	3.7
Aircraft Procurement, Navy	-	0.2	0.2
Weapons Procurement, Navy	-	-	-
Ammunition Procurement, Navy/MC	-	-	-
Shipbuilding & Conversion, Navy	2.1	3.4	3.5
Other Procurement, Navy	0.0	0.6	0.5
Procurement, Marine Corps	-	-	-
Family Housing, Navy/MC	75.5	73.6	75.7
Research, Dev., Test, & Eval., Navy	0.5	2.9	3.0
Military Construction, Navy	1.2	1.1	1.8
National Defense Sealift Fund	-	0.0	-
Other Navy Appropriations	1.3	0.9	1.0
Other Marine Corps Appropriations	0.3	0.0	0.0
Department of the Army	30.2	56.0	48.0
Army Operation & Maintenance	27.5	19.4	19.1
Army Res, Dev, Test, Eval	0.4	1.2	1.4
Army Procurement	0.0	0.0	0.1
Army Other	2.3	35.3	27.5
Department of the Air Force	16.6	14.3	14.1
Air Force Operation & Maintenance	13.1	10.5	10.5
Air Force Res, Dev, Test, Eval	0.0	0.1	0.1
Air Force Procurement	-	-	-
Air Force Other	3.5	3.7	3.5
DOD Appropriation Accounts	185.5	186.5	176.6
Base Closure & Realignment	0.7	7.6	7.4
Operation & Maintenance Accounts	89.4	84.5	99.7
Res, Dev, Test & Eval Accounts	4.3	2.7	2.9
Procurement Accounts	12.2	0.7	0.7
Defense Emergency Relief Fund	-	-	-
DOD Other	78.9	91.0	66.0
b. Orders from other Fund Activity Groups	440.2	426.3	420.4
c. Total DoD	2,772.7	2,695.5	2,684.6
d. Other Orders:	342.7	301.1	299.6
Other Federal Agencies	26.8	26.9	29.7
Foreign Military Sales	0.3	0.4	0.4
Non Federal Agencies	315.5	273.8	269.6
2. Carry-In Orders	210.9	208.2	241.7
3. Total Gross Orders	3,326.2	3,204.8	3,225.9
a. Funded Carry-Over before Exclusions	208.2	241.7	252.4
4. Revenue(-)	3,118.0	2,963.1	2,973.4
5. End of Year Work-In-Process (-)	-	-	-
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	24.86	31.68	30.21
7. Funded Carryover	183.4	210.0	222.2

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
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2016 Estimated Actuals	2,996.6
FY 2017 President's Budget:	3,047.9
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	0.0
Pricing Adjustments:	1.0
Civilian Personnel - pay raise and benefits increase for General Schedule (GS); Wage Grade (WG); and Foreign National Direct Hire (FNDH)	8.7
Fuel Price	-7.7
Program Changes:	-6.3
Increase in fuel costs at Facilities Engineering Command (FEC) Washington based on prior year actual consumption	11.9
Increase in GS employees to accommodate customer workload as FECs continue to recover from the hiring freeze	9.7
Increase in Federal Employees Compensation Act (FECA) costs	2.4
Increase in WG overtime at FECs Southwest & Northwest due to vacancies and at FEC Hawaii to support Rim of the Pacific (RIMPAC); an international maritime exercise	2.8
Decrease in supplies and materials as Shop Store inventories are reduced	-9.8
Reduction in contract costs as work is returned to in-house	-23.3
FY 2017 Current Estimate:	3,042.6

**CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2017 Current Estimate:	3,042.6
Pricing Adjustments:	66.4
Annualization of Prior Year Pay Raises	4.3
Civilian Personnel	4.2
Military Personnel	0.1
FY 2018 Pay Raise	10.5
Civilian Personnel	10.4
Military Personnel	0.1
Fuel Price Changes	8.9
General Purchase Inflation	42.8
Productivity Initiatives and Other Efficiencies:	-18.2
Steam Decentralization at FEC Southwest and privatization of electricity at Sigsbee Annex	
Public Works Department (PWD) Key West FEC Southeast	-10.5
Savings associated with prior year Energy Restoration & Modernization (RMe) Efficiency projects	-4.9
Transfer of Rail Operations from PWD Crane - FEC MidLant to U.S. Army and removal of Environmental Lab Services from Navy Working Capital Fund (NWCF) at FEC Marianas	-2.8
Program Changes:	-16.0
Reduction in fuel consumption and shop equipment purchases	-3.7
Decrease in one time FY17 costs for rail car disposal	-2.7
Decrease in costs associated with a baseline review resulting in an overall net reduction in budgeted units for various commodities	-5.3
Decrease in cost for one-time FY17 Energy Restoration and Modernization (RMe) projects	-10.2
Continued decrease in shop materials and supplies	-12.5
Increase in costs associated with CyberSafe and Risk Management	1.6
FY18 Energy Restoration and Modernization (RMe) projects	16.7
Other Changes:	108.5
Facilities Sustainment, Restoration & Modernization®	76.6
Impact of Euro and Yen Budget Exchange rate	31.9
FY 2018 Estimate:	3,183.3

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CAPITAL INVESTMENT SUMMARY DEPARTMENT OF THE NAVY BASE SUPPORT - FACILITIES ENGINEERING COMMANDS FISCAL YEAR (FY) 2018 BUDGET ESTIMATES MAY 2017 (DOLLARS IN MILLIONS)							
Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	25	\$15.271	11	\$7.885	15	\$9.176
	- Vehicles	5	\$2.154	2	\$0.300	3	\$0.575
	- Material Handling	11	\$11.199	7	\$6.050	8	\$6.951
	- 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	9	\$1.918	2	\$1.535	4	\$1.650
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 <= \$2.000M)	31	\$11.257	10	\$7.366	11	\$6.581
	- Replacement Capability	10	\$3.966	2	\$0.695	2	\$1.325
	- New Construction	16	\$6.399	7	\$6.106	8	\$4.806
	- Environmental Capability	5	\$0.892	1	\$0.565	1	\$0.450
	Grand Total	56	\$26.528	21	\$15.251	26	\$15.757
	Total Capital Outlays		\$17.307		\$15.289		\$15.656
	Total Capital Investment Recovery		\$14.048		\$15.363		\$15.599

CAPITAL INVESTMENT JUSTIFICATION			FISCAL YEAR (FY) 2018 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)			MAY 2017						
Department of the Navy / Base Support		#001 - Non-ADP Equipment					Facilities Engineering Command		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	5	431	\$2,154	2	150	\$300	3	192	\$575
Material Handling	11	1,018	\$11,199	7	864	\$6,050	8	869	\$6,951
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	\$0	0	0	\$0	0	0	\$0
Support Equipment	9	213	\$1,918	2	768	\$1,535	4	413	\$1,650
Total	25	611	\$15,271	11	717	\$7,885	15	612	\$9,176
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) 2018 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)			MAY 2017						
Department of the Navy / Base Support			#004 - Minor Construction (\$250K - \$1 M)				Facilities Engineering Command		
Minor Construction	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	10	397	\$3,966	2	348	\$695	2	663	\$1,325
New Construction	16	400	\$6,399	7	872	\$6,106	8	601	\$4,806
Environmental Capability	5	178	\$892	1	565	\$565	1	450	\$450
Total	31	363	\$11,257	10	737	\$7,366	11	598	\$6,581

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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$16.896	\$15.271	-\$1.625	
			Vehicles	\$1.792	\$2.154	\$0.362	Vehicles, increase cost
			Material Handling	\$13.479	\$11.199	-\$2.280	Purchases cancelled
			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	\$1.625	\$1.918	\$0.293	Crane purchase, increase cost
	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		\$12.357	\$11.257	-\$1.100	
			Replacement	\$4.135	\$3.966	-\$0.169	Minor construction - replacement, decrease cost
			New Construction	\$6.822	\$6.399	-\$0.423	Purchases cancelled
			Environmental Capability	\$1.400	\$0.892	-\$0.508	Purchases cancelled
TOTAL FY 2016 CIP Program				\$29.253	\$26.528	-\$2.725	
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2017	1	Non ADP		\$8.935	\$7.885	-\$1.050	
			Vehicles	\$1.050	\$0.300	-\$0.750	Adjust capability to support equipment
			Material Handling	\$7.100	\$6.050	-\$1.050	Purchases cancelled
			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	\$0.785	\$1.535	\$0.750	Adjust capability
	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		\$6.428	\$7.366	\$0.938	
			Replacement	\$1.167	\$0.695	-\$0.472	Purchase cancelled
			New Construction	\$4.696	\$6.106	\$1.410	Projects accelerated due to requirements changing
			Environmental Capability	\$0.565	\$0.565	\$0.000	
TOTAL FY 2017 CIP Program				\$15.363	\$15.251	-\$0.112	FEC FE FY15 Water Pipeline, increase cost
FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2018	1	Non ADP		\$9.176	\$9.176	\$0.000	
			Vehicles	\$0.575	\$0.575	\$0.000	
			Material Handling	\$6.951	\$6.951	\$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	\$1.650	\$1.650	\$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		\$6.581	\$6.581	\$0.000	
			Replacement	\$1.325	\$1.325	\$0.000	
			New Construction	\$4.806	\$4.806	\$0.000	
			Environmental Capability	\$0.450	\$0.450	\$0.000	
TOTAL FY 2018 CIP Program				\$15.757	\$15.757	\$0.000	

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
BASE SUPPORT - FACILITIES ENGINEERING COMMANDS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016 -----	FY 2017 -----	FY 2018 -----
Part 1			
1. Net Carry-In	210.9	208.2	241.7
2. Revenue	3,118.0	2,963.1	2,973.4
3. New Orders	3,115.3	2,996.6	2,984.2
4. Exclusions:			
Foreign Military Sales	0.3	0.4	0.4
Base Realignment and Closure	0.7	7.6	7.4
Other Federal Department and Agencies	26.8	26.9	29.7
Non-Federal and Others	315.5	273.8	269.6
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
5. Orders for Carryover Calculation	2,772.0	2,687.9	2,677.2
6. Weighted Average Outlay Rate	70.1%	70.0%	70.1%
7. Carryover Rate	29.9%	30.0%	29.9%
8. Allowable Carryover	831.1	811.2	802.3
Allowable Carryover(First Year)	828.8	806.4	800.5
Allowable Carryover (Second Year Procurement-funded Orders)	2.3	4.8	1.8
Part II			
9. Balance of Customer Order at Year End	208.2	241.7	252.4
10. Work-in-progress	-	-	-
11. Exclusions:			
Foreign Military Sales	0.0	0.1	0.2
Base Realignment and Closure	0.1	7.2	8.5
Other Federal Department and Agencies	3.2	4.9	5.4
Non-Federal and Others	21.6	19.4	16.1
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
12. Calculated Actuals Carryover	183.4	210.0	222.2

Some totals may not add due to rounding.

10. EXWC

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DEPARTMENT OF THE NAVY
BASE SUPPORT
NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER (EXWC)
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017

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.

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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

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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:

<u>Activity</u>	<u>Location</u>
EXWC Headquarters	Port Hueneme, CA
East Coast Detachment	Navy Yard, Washington, DC

Significant Changes Since the FY 2017 President's Budget:

The most significant change since the FY 2017 President's Budget is EXWC's progress towards the stand-up and maturity of the Technical Director Office and associated staff. The initial phase of the stand-up has increased the direct workload of EXWC.

Another significant development in EXWC's business for the FY 2018 budget is the ramp up of cyber security initiatives protecting industrial control systems associated with shore facilities. This work is primarily occurring in the Public Works (PW) and Chief Information Office (CIO) shops, working jointly to address significant threats to our Navy infrastructure. The customer base forecast for ocean facilities mission is strong and forecasted to provide opportunities for

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FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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greater support to Naval Sea Systems Command (NAVSEA) in the area of undersea cable facilities.

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 the last twelve months resulting in benefits that include cost avoidance, reduction in labor hours, and improved quality, productivity, energy, security, and safety.

The EXWC recently completed projects that significantly impact the organization in the following functional areas: Business, Contracts, Expeditionary, Finance, Information Systems, and Logistics Management. Cost savings for these events estimated to be the equivalent of 3.5 redirected full time equivalents (FTEs), and over 1,650 labor hours of annual cost avoidance. Similar efforts are scheduled to continue in the outyears.

Financial Profile:

<u>Revenue/Expense/Operating Result (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Orders	\$82.5	\$73.4	\$77.8
Revenue	\$78.0	\$76.3	\$80.1
Expense	<u>\$78.8</u>	<u>\$76.2</u>	<u>\$77.4</u>
Operating Results	(\$0.8)	\$0.1	\$2.6
Other Changes Affecting NOR	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	(\$0.8)	\$0.1	\$2.6
Other Changes Affecting AOR	\$0.0	\$0.0	\$0.0
Accumulated Operating Results (AOR)	<u>(\$2.7)</u>	<u>(\$2.6)</u>	<u>\$0.0</u>

Some totals may not add due to rounding.

Revenue and Expense: The changes in orders from FY 2017 to FY 2018 primarily reflect workload projections based on updated new orders estimates of customers workload projections. The increases in revenue and expense between FY 2017 and FY 2018 are a result of economic assumptions for pay raise and inflation/pricing.

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<u>Collections/Disbursements/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$76.4	\$78.5	\$78.2
Disbursements	\$79.6	\$73.6	\$74.9
Outlays	\$3.2	(\$4.9)	(\$3.4)

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 2017 to FY 2018.

<u>Direct Labor Hours (000):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Current Estimate	529	496	496

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.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Stabilized Cost (\$Millions)	\$58.8	\$57.3	\$58.3
Workload (DLHs) (000)	529	496	496
Unit cost (per DLH)	\$111.1	\$115.5	\$117.4

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.

<u>Stabilized / Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Stabilized Rate	\$113.70	\$125.43	\$121.61
Change from Prior Year	17.09%	10.32%	-3.05%
Composite Rate Change	11.20%	7.09%	-1.50%

Narrative

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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:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	404	395	395
Civilian Workyears (straight time)	395	388	388
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 does not have any CIP authority.

<u>Carryover Compliance (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Carry-In	\$30.8	\$35.3	\$32.3
Allowable Carryover	\$38.1	\$30.0	\$31.5
Calculated Actual Carryover	\$33.1	\$30.1	\$27.9
Delta (Actual-Allowable): Above Ceiling (+)/Below Ceiling (-)	(\$5.0)	\$0.1	(\$3.6)

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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	77.9	76.3	80.0
Capital Surcharges	-	-	-
Capital Investment Recovery	0.0	0.0	0.0
Other Income			
Total Income	78.0	76.3	80.1
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.4	0.4	0.4
Civilian Personnel Compensation & Benefits	54.2	54.2	55.2
Travel and Transportation of Personnel	4.4	4.7	4.8
Material & Supplies (Internal Operations)	2.3	1.9	2.0
Equipment	2.9	1.0	1.0
Other Purchases from NWCF	0.6	1.9	2.0
Transportation of Things	0.3	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	-	-	-
Rent, Communication, Utilities & Misc Charges	0.6	0.6	0.6
Other Purchased Services	12.9	11.0	11.0
Total Expenses	78.8	76.2	77.4
Work in Process Adjustment	-	-	-
Comp Work for Activity Retention Adjustment	-	-	-
Cost of Goods Sold	78.8	76.2	77.4
Operating Result	(0.8)	0.1	2.6
Adjustments Affecting NOR	-	-	-
Capital Surcharges	-	-	-
Extraordinary Expenses Unmatched	-	-	-
Other Changes Affecting NOR (All Others)	-	-	-
Net Operating Result	(0.8)	0.1	2.6
PY AOR	(1.9)	(2.7)	(2.6)
TOTAL AOR	(2.7)	(2.6)	-
Non-Recoverable Adjustments impacting AOR	-	-	-
AOR for budget purposes	(2.7)	(2.6)	-

Exhibit Fund-14 Revenue and Expenses

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

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
1. New Orders	82.5	73.4	77.8
a. Orders from DoD Components:	77.6	63.5	69.8
Department of the Navy	66.5	56.2	62.6
O & M, Navy	37.3	25.2	36.7
O & M, Marine Corps	0.9	1.4	0.7
O & M, Navy Reserve	0.6	0.1	0.1
O & M, Marine Corp Reserve	0.0	-	-
Aircraft Procurement, Navy	-	-	-
Weapons Procurement, Navy	-	-	-
Ammunition Procurement, Navy/MC	-	-	-
Shipbuilding & Conversion, Navy	-	-	-
Other Procurement, Navy	1.4	6.7	4.9
Procurement, Marine Corps	0.1	-	-
Family Housing, Navy/MC	0.0	-	-
Research, Dev., Test, & Eval., Navy	15.0	20.8	16.1
Military Construction, Navy	11.5	1.7	3.7
National Defense Sealift Fund	-	-	-
Other Navy Appropriations	0.0	0.3	-
Other Marine Corps Appropriations	-	0.1	0.3
Department of the Army	2.5	2.9	1.5
Army Operation & Maintenance	1.6	1.2	1.3
Army Res, Dev, Test, Eval	0.9	1.6	0.2
Army Procurement	-	0.1	-
Army Other	0.0	-	-
Department of the Air Force	4.1	1.7	2.8
Air Force Operation & Maintenance	0.3	0.2	2.0
Air Force Res, Dev, Test, Eval	3.7	1.5	0.8
Air Force Procurement	-	-	-
Air Force Other	0.1	-	-
DOD Appropriation Accounts	4.5	2.7	2.9
Base Closure & Realignment	0.8	0.9	0.9
Operation & Maintenance Accounts	0.2	0.1	0.2
Res, Dev, Test & Eval Accounts	3.3	1.7	1.8
Procurement Accounts	-	-	-
Defense Emergency Relief Fund	-	-	-
DOD Other	0.2	-	0.0
b. Orders from other Fund Activity Groups	3.1	8.6	6.9
c. Total DoD	80.8	72.1	76.7
d. Other Orders:	1.7	1.2	1.1
Other Federal Agencies	1.2	1.0	0.8
Foreign Military Sales	0.2	-	-
Non Federal Agencies	0.4	0.3	0.3
2. Carry-In Orders	30.8	35.3	32.3
3. Total Gross Orders	113.2	108.6	110.2
a. Funded Carry-Over before Exclusions	35.3	32.3	30.1
4. Revenue(-)	78.0	76.3	80.1
5. End of Year Work-In-Process (-)	-	-	-
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	2.2	2.2	2.2
7. Funded Carryover	33.1	30.1	27.9

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
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>Costs</u>
FY 2016 Actuals	78.8
FY 2017 President's Budget:	76.0
Estimated Impact in FY 2017 of Actual FY 2016 Experience:	0.0
Pricing Adjustments:	0.3
Civilian Personnel Pay Raise increase	0.2
Civilian Personnel increase in average cost benefits of Federal Employees Retirement System (FERS) and from Civil Service Retirement System (CSRS) to FERS.	0.1
Fuel Price	0.0
Other Changes:	-0.1
Increase in Federal Employees Compensation Act (FECA) charges	0.3
Increase of 32 ES and 34 WYs for positions vacated during the hiring freeze.	3.4
Reduction in contract costs as work is accomplished in-house	-3.7
FY 2017 Current Estimate:	76.2

CHANGES IN THE COSTS OF OPERATIONS
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>Costs</u>
FY 2017 Current Estimate:	76.2
Pricing Adjustments:	1.4
Annualization of Prior Year Pay Raises	0.3
Civilian Personnel	0.3
Military Personnel	0.0
FY 2018 Pay Raise	0.8
Civilian Personnel	0.7
Military Personnel	0.0
Fuel Price Changes	0.0
General Purchase Inflation	0.3
Other Price Changes	0.0
 Productivity Initiatives and Other Efficiencies:	 0.0
 Program Changes:	 -0.1
Reduction in Research and Development contracts	-0.1
 Other Changes:	 0.0
Depreciation	0.0
Facilities Sustainment, Restoration & Modernization	0.0
 FY 2018 Estimate:	 77.4

CARRYOVER RECONCILIATION
DEPARTMENT OF THE NAVY
BASE SUPPORT - NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
	-----	-----	-----
Part 1			
1. Net Carry-In	30.8	35.3	32.3
2. Revenue	78.0	76.3	80.1
3. New Orders	82.5	73.4	77.8
4. Exclusions:			
Foreign Military Sales	0.2	-	-
Base Realignment and Closure	0.8	0.9	0.9
Other Federal Department and Agencies	1.2	1.0	0.8
Non-Federal and Others	0.4	0.3	0.3
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
5. Orders for Carryover Calculation	80.0	71.2	75.8
6. Weighted Average Outlay Rate	53.9%	58.3%	60.0%
7. Carryover Rate	46.1%	41.7%	40.0%
8. Allowable Carryover	38.1	29.94	31.5
Allowable Carryover(First Year)	36.9	29.7	30.3
Allowable Carryover (Second Year Procurement-funded Orders)	1.3	0.2	1.2
Part II			
9. Balance of Customer Order at Year End	35.3	32.3	30.1
10. Work-in-progress	-	-	-
11. Exclusions:			
Foreign Military Sales	0.0	0.0	0.0
Base Realignment and Closure	1.5	1.5	1.5
Other Federal Department and Agencies	0.5	0.5	0.5
Non-Federal and Others	0.2	0.2	0.2
Institutional Major Range & Test Facility Base	-	-	-
OUSD(C) Approved Carryover Waiver	-	-	-
12. Calculated Actuals Carryover	33.1	30.13	27.9

Some totals may not add due to rounding.

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11. Navy Supply Management

Back of Tab

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATE
MAY 2017

Mission Statement/Overview:

The mission of Navy Supply Management (SM) is to perform inventory management functions resulting in the sale of aviation and shipboard 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 right cost which is vital to equipping and sustaining 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. Costs related to supplying this material to customers are recouped through stabilized rate recovery elements such as prior year gains/losses, inventory maintenance, repair costs including attrition, and local elements. The Navy SM submission incorporates all execution plans that impact net outlays in order to accurately plan for monthly cash balances that through the budget year. Navy SM has six Budget Projects (BP) in order to organize the financial operations of the fund.

Budget Project

Wholesale

Aviation Consumables	BP34
Ship Repairables and Consumables	BP81
Aviation Consumables	BP85

Retail

Ship's Store	BP21
General Consumables	BP28

Operations

Operations and Reimbursables	BP91
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Activity Group Composition:

Navy Working Capital Fund Supply Management (NWCF-SM) activity group is comprised of:

Naval Supply Systems Command Weapon Systems Support (NAVSUP WSS):

NAVSUP WSS Mechanicsburg, PA

NAVSUP WSS Philadelphia, PA

NAVSUP Global Logistics Support:

NAVSUP Fleet Logistics Center, San Diego, CA

NAVSUP Fleet Logistics Center, Jacksonville, FL

NAVSUP Fleet Logistics Center, Norfolk, VA

NAVSUP Fleet Logistics Center, Pearl Harbor, HI

NAVSUP Fleet Logistics Center, Puget Sound, WA

NAVSUP Fleet Logistics Center, Yokosuka, JP

NAVSUP Fleet Logistics Center, Sigonella, IT

NAVSUP Fleet Logistics Center, Manama, BH

NAVSUP Business Systems Center, Mechanicsburg, PA

**NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATE
MAY 2017**

Significant Changes Since the FY 2017 President's Budget:

The following significant changes have occurred since the FY 2017 President's Budget:

The Naval Supply Systems Command's (NAVSUP's) FY 2018 budget estimates reflect increases in most categories of NAVSUP's financial profile due to the Navy being in a transition period. The Navy is supporting life-cycle extensions for legacy systems/platforms, while at the same time establishing and maturing support for new systems/platforms. These transitions are planned on a schedule to meet enterprise, service, and defense-wide mission objectives supporting operational commanders.

Cost Reductions

The NAVSUP's FY 2018 budget estimates reflect 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 is a reduction of \$139.7 million in FY 2016 and in FY 2017.

Consumable Item Transfer (CIT)

In accordance with the Financial Management Regulation (FMR), all services may request reimbursement from the Defense Logistics Agency (DLA) for the value of inventory due-in from procurement at the time of each logistics reassignment transfer. NAVSUP collected \$21.8 million in FY 2016. The FY 2017 and FY 2018 planned reimbursements are \$27.3 million and \$1.4 million respectively.

Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Revenue	\$6,819.6	\$7,074.0	\$7,306.5
Expense	<u>\$6,923.2</u>	<u>\$6,998.7</u>	<u>\$7,250.2</u>
Operating Results	(\$103.6)	\$75.3	\$56.3
Capital Surcharge	<u>\$1.5</u>	<u>(\$1.7)</u>	<u>(\$0.1)</u>
Net Operating Results (NOR)	(\$102.1)	\$73.6	\$56.2
Prior Year AOR	\$122.3	(\$129.8)	(\$56.2)
Other Changes Affecting AOR	<u>(\$150.0)</u>	<u>\$0.0</u>	<u>\$0.0</u>
Accumulated Operating Results (AOR)	<u>(\$129.8)</u>	<u>(\$56.2)</u>	<u>\$0.0</u>

Note: Amounts may not add due to rounding

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATE
MAY 2017

Revenue and Expense: FY 2016 reflects actuals. The FY 2017 revenue reflects an increase from the FY 2017 President's Budget due to anticipated demand increases from our customers for the Navy transition period. Wholesale expenses are commensurate with sales. Operating expenses reflect increased Reimbursable workload, and adjustments for DLA Service Level Bills (SLBs), Sustainment Restoration Modernization (SRM) and Economic Assumptions. Revenue is projected to increase in FY 2018 driven by corresponding rate adjustments and anticipated customer demand increases.

<u>Obligation Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Wholesale	\$5,344.6	\$6,669.8	\$6,351.1
Retail	\$776.2	\$784.2	\$803.2
Operating	\$1,207.6	\$1,388.5	\$1,390.4
CIP	\$4.9	\$8.0	\$6.2
Total	\$7,333.3	\$8,850.5	\$8,550.9

Note: Amounts may not add due to rounding

Wholesale: The FY 2016 obligations reflect actuals. FY 2017 obligations reflect an increase from the FY 2017 President's Budget of \$2,079.5 million. Obligation authority for the Supply Management portion of the Working Capital Fund is closely linked to a demand signal from the Fleet and placed on contract an acquisition lead time in advance. The Navy is in a transition period, supporting life-cycle extensions for legacy systems/platforms while at the same time establishing and maturing support for new systems/platforms. Some examples include P-8A Poseidon, Gerald R. Ford Class Carriers, Littoral Combat Ships (LCS), DDG-1000 Class Destroyers, and DDG-51 Class Destroyers, while at the same time maintaining legacy platforms/systems and service life extensions to include F/A-18 Hornets, C-2A Greyhounds, Patrol Coastal Ships, SSN-774 Virginia Class Submarines, and Mine Counter Measure Ships. These transitions are planned on a schedule to meet enterprise, service, and defense-wide mission objectives supporting operational commanders. The combined effects described above ultimately support the Optimized Fleet Response Plan (OFRP) and Navy's ability to provide the required capabilities to support assigned missions and readiness. If Navy is not able to meet and sustain OFRP requirements, further service life extensions of legacy platforms/systems will likely occur. FY 2018 obligation authority reflects a continuation of these requirements. The FY 2018 decrease in obligation authority is attributable to the ramp down of the life extension programs for F/A-18A-D Hornet Flight Control Surfaces, P-8A Poseidon reduction in outfitting plan, and Maritime special program reductions.

Retail: There are no significant changes in obligations forecasted from FY 2017 to FY 2018.

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATE
MAY 2017

Operating: FY 2016 obligations reflect actuals. There are no significant changes in obligations forecasted from FY 2017 to FY 2018.

<u>Collections/Disbursement/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$6,850.6	\$7,056.9	\$7,282.6
Disbursements	\$6,481.7	\$7,035.7	\$7,231.3
Transfers	\$21.8	(\$220.7)	\$1.4
Outlays (Incorporates Transfers)	(\$390.7)	\$199.5	(\$52.7)

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 incorporates established financial lead-times between obligations and disbursements in order to minimize the possible risk to cash solvency. Current net outlay projections reflect changes in workload and updated operating estimates. This budget includes a cash transfer out in FY 2017 of \$248 million, to realign cash within the NWCF.

<u>Sales (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Wholesale	\$5,828.5	\$6,102.5	\$6,340.7
Retail	\$834.2	\$788.4	\$807.4
Total	\$6,662.8	\$6,890.9	\$7,148.0

Note: Amounts may not add due to rounding

Wholesale & Retail: 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. Retail sales remain consistent with the FY 2017 President's budget.

Metrics: Metrics provide information on the scope of work performed by Navy Supply Management. Adjustments have been made to align metrics with current obligations and sales projections.

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Items Managed	381,013	388,549	396,868
Requisitions Received	432,026	437,756	456,353
Receipts	571,919	644,938	721,321
Issues	787,632	767,366	798,782
Contracts Executed	26,066	38,107	29,465

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATE
MAY 2017

Undelivered Orders (\$Millions): Undelivered orders (UDOs) represent contracts or orders for goods in which a liability has not yet accrued. The accrual of liability creates an outlay requirement which has been accounted for in supply management cash projections. The significant increases in FY 2017 and FY 2018 are driven by the growth in obligation requirements with disbursements projected beyond the budget year due to aviation long-lead time deliveries.

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Undelivered Orders (\$Millions)	\$6,282.9	\$8,097.7	\$9,417.3

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.

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Customer Wait Time (CWT) in days	13	16	16
Ship Operating Time w/C3/C4 CASREP			
Deployed	44%	25%	25%
Non-deployed	27%	28%	28%
Aircraft Non Mission Capable Supply			
Deployed	5%	10%	10%
Non-Deployed	6%	10%	10%
Supply Material Availability	80%	85%	85%

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Wholesale	\$ 1.097	\$ 1.290	\$ 1.195
Retail	\$ 0.930	\$ 1.001	\$ 1.001

Unit Cost: Unit cost provides cost per unit sold based on total cost and the total anticipated number of sales. Unit cost can change in the year of execution based on the relationship between obligations and sales. NWCF-SM obligates contract authority a financial lead-time in advance of the customer demand, typically 12 to 36 months beyond the budget year. The increased obligations in FY 2017 and FY 2018 support the Navy's transition plan, which forecasts increased customer requirements based on readiness requirements.

NARRATIVE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT – NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATE
MAY 2017

<u>Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Annual Price Change (APC)	3.483%	4.945%	-0.005%
Composite Cost Recovery Rate (CRR)	15.901%	18.694%	17.420%

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	7,010	6,944	7,104
Civilian Workyears (straight time)	7,053	6,939	7,099
Military End Strength	364	364	364
Military Workyears	364	364	364

Civilian Personnel: FY 2016 End Strength (ES) and Full Time Equivalents (FTEs) reflect actuals. FTEs were adjusted in FY 2017 and FY 2018 to reflect anticipated workload demand and is reflected in NAVSUP's hiring plan.

Military Personnel: No change.

<u>CIP Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Equipment, Non-ADPE* / Telecom	\$3.5	\$6.3	\$3.3
Equipment, ADPE / Telecom	\$0.9	\$1.7	\$2.1
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$0.5</u>	<u>\$0.0</u>	<u>\$0.8</u>
Total	\$4.9	\$8.0	\$6.2

*Automatic Data Processing Equipment (ADPE)

Note: Amounts may not add due to rounding.

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.

REVENUE AND EXPENSE SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	FY 2016	FY 2017	FY 2018
Revenue:			
Gross Sales			
Operations	6,657.849	6,882.856	7,141.838
Capital Surcharge	(1.478)	1.707	0.073
Capital Investment Recovery	6.421	6.293	6.127
Total Gross Sales	6,662.792	6,890.856	7,148.038
Major Construction Dep	0.000	0.000	0.000
Other Income	404.902	437.948	459.922
Refunds/Discounts (- Credit Sales)	(248.061)	(254.798)	(301.414)
 TOTAL INCOME	 6,819.633	 7,074.006	 7,306.546
Expenses:			
Cost of Material Sold from Inventory	5,709.253	5,603.943	5,853.714
Salaries and Wages:			
Military Personnel	30.637	31.448	31.706
Civilian Personnel	593.776	599.480	627.442
Travel & Transportation of Personnel	11.393	12.704	12.958
Materials & Supplies	3.184	5.218	5.322
Equipment	0.000	0.000	0.000
Other Purchases from Revolving Funds	194.509	248.555	210.867
Transportation of Things	110.517	166.623	169.955
Capital Investment Recovery	6.421	6.293	6.127
Printing and Reproduction	3.120	4.319	4.406
Advisory and Assistance Services	0.000	0.000	0.000
Rent, Communication, Utilities & Misc	74.441	73.392	74.860
Other Purchased Services	185.996	246.761	252.876
 TOTAL EXPENSES	 6,923.247	 6,998.736	 7,250.233
Operating Result	(103.614)	75.270	56.313
Capital Surcharge Reservation	1.478	(1.707)	(0.073)
Plus Appro Affecting NOR/AOR	0.000	0.000	0.000
Plus Other Changes Affecting NOR	0.000	0.000	0.000
Net Operating Result	(102.136)	73.563	56.240
Prior Year AOR	122.333	(129.803)	(56.240)
Other Changes Affecting AOR	0.000	0.000	0.000
Accumulated Operating Result	20.197	(56.240)	0.000
Non-Recoverable Adjustments impacting AOR*	(150.000)	0.000	0.000
AOR for budget purposes	(129.803)	(56.240)	0.000

*Reflects adjustments to AOR to maintain operating cash associated with budgetary resources required for projected outlays

SOURCES OF REVENUE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
1. New Orders			
a. Orders from DoD Components:			
Dept. of Navy			
Military Personnel, M.C.	-	-	-
O&M Marine Corps	1.982	2.013	2.147
Reserve Personnel, M.C.	-	-	-
Procurement, M.C.	6.907	7.012	7.480
Military Construction, Navy	-	-	-
RDT & E, Navy	33.468	33.979	36.243
Reserve Personnel, Navy	-	-	-
Military Personnel, Navy	-	-	-
Aircraft Procurement, Navy	887.322	839.285	835.770
Weapons Procurement, Navy	6.894	0.800	0.800
Shipbuilding & Conv. Navy	31.081	30.700	30.700
O&M, Navy	4,899.269	5,036.907	5,451.785
O&M, Navy Reserve	77.055	79.531	85.774
Other Procurement, Navy	65.409	48.300	50.500
Navy Working Capital Fund	176.082	189.484	196.389
	6,185.470	6,268.012	6,697.587
Orders from other DoD Components			
Army	8.267	8.751	8.970
Air Force	229.150	242.560	248.631
Other DoD	35.493	37.571	38.511
	272.910	288.822	296.122
b. Orders from other Fund Business Areas:			
Distribution Depots, Navy	-	-	-
Logistics Support, Navy	-	-	-
c. Total DoD	6,458.380	6,556.893	6,993.699
d. Other Orders:			
Other Federal Agencies	16.550	16.802	17.922
Trust Fund	-	-	-
Non-Federal Agencies *	136.001	140.750	144.190
Foreign Military Sales (FMS)	107.017	108.649	155.887
	259.568	266.201	277.999
Total New Orders	6,717.948	6,823.094	7,271.698
2. Carry-In Orders	1,576.649	1,631.805	1,564.043
3. Total Gross Orders	8,294.597	8,454.899	8,835.741
4. Carry-Out Orders (-)	1,631.805	1,564.043	1,687.703
5. Gross Sales	6,662.792	6,890.856	7,148.038
Reimbursable Orders (BP 91)	404.902	437.948	459.922
6. Credit (-)	248.061	254.798	301.414
7. Net Sales	6,819.633	7,074.006	7,306.546

* Non-federal agencies line includes cash sales

CAPITAL INVESTMENT SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

Line #	Description	FY 2016		FY 2017		FY 2018	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	0	\$3.540	0	\$6.300	0	\$3.300
	- Vehicles	0	\$0.000	0	\$0.300	0	\$0.300
	- Material Handling	0	\$0.996	0	\$1.000	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	\$2.544	0	\$5.000	0	\$0.500
	- Support Equipment	0	\$0.000	0	\$0.000	0	\$0.000
2	ADPE and Telecom Equipment >= \$.250M	0	\$0.857	0	\$1.700	0	\$2.100
	- Computer Hardware (Production)	0	\$0.857	0	\$1.700	0	\$2.100
	- 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 <= \$2.000M)	0	\$0.546	0	\$0.000	0	\$0.800
	- Replacement Capability	0	\$0.546	0	\$0.000	0	\$0.800
	- 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	\$4.943	0	\$8.000	0	\$6.200
	Total Capital Outlays		\$3.263		\$5.000		\$6.500
	Total Depreciation Expense		\$6.421		\$6.293		\$6.127

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2018 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MAY 2017					
Department of the Navy/ Supply		#001 - Non-ADP Equipment					Supply Management - Navy		
Non-ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	0	\$0	0	0	\$300	0	0	\$300
Material Handling	0	0	\$996	0	0	\$1,000	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	\$2,544	0	0	\$5,000	0	0	\$500
Support Equipment	0	0	\$0	0	0	\$0	0	0	\$0
Total	0	0	\$3,540	0	0	\$6,300	0	0	\$3,300

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.

According to a FY14 survey completed by the Navy Crane Center NAVSUP's large bridge crane and numerous smaller ones are now in need of replacement. Having functioning cranes is essential to maintaining NAVSUP's operations and a safe working environment.

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 required 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)				MAY 2017					
Department of the Navy/ Supply		#002 - ADP Equipment					Supply Management - Navy		
ADP Equipment	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	0	0	\$857	0	0	\$1,700	0	0	\$2,100
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	\$857	0	0	\$1,700	0	0	\$2,100
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. 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)				MAY 2017					
Department of the Navy/ Supply		#004 - Minor Construction (\$250K - \$1 M)				Supply Management - Navy			
Minor Construction	FY 2016			FY 2017			FY 2018		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	0	0	\$546	0	0	\$0	0	0	\$800
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	\$546	0	0	\$0	0	0	\$800
Justification: Minor Construction: NAVSUP is responsible for the minor construction portion of Real Property Maintenance (RPM) 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. 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. Each minor construction project must be less than \$1,000,000. No minor construction project exceeds the current MILCON threshold.									

CAPITAL BUDGET EXECUTION
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2016	1	Non ADP		\$2.200	\$3.540	\$1.340	Reprogramming action-February 2016
			Vehicles	\$1.200	\$0.000	-\$1.200	
			Material Handling	\$1.000	\$0.996	-\$0.004	
			Machinery	\$0.000	\$2.544	\$2.544	
	2	ADP		\$0.900	\$0.857	-\$0.043	Actual Execution
			Computer Hardware (Production)	\$0.900	\$0.857	-\$0.043	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$1.900	\$0.546	-\$1.354	Reprogramming Action-February 2016
			Replacement	\$1.900	\$0.546	-\$1.354	
TOTAL FY 2016 CIP Program				\$5.000	\$4.943	-\$0.057	Actual Execution
2017	1	Non ADP		\$6.300	\$6.300	\$0.000	
			Vehicles	\$0.300	\$0.300	\$0.000	
			Material Handling	\$1.000	\$1.000	\$0.000	
			Machinery	\$5.000	\$5.000	\$0.000	
	2	ADP		\$0.900	\$1.700	\$0.800	Reprogramming Action-February 2017
			Computer Hardware (Production)	\$0.900	\$1.700	\$0.800	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$0.800	\$0.000	-\$0.800	Reprogramming Action-February 2017
			Replacement	\$0.800	\$0.000	-\$0.800	
TOTAL FY 2017 CIP Program				\$8.000	\$8.000	\$0.000	
2018	1	Non ADP		\$3.300	\$3.300	\$0.000	
			Vehicles	\$0.300	\$0.300		
			Material Handling	\$2.500	\$2.500		
			Machinery	\$0.500	\$0.500		
	2	ADP		\$2.100	\$2.100	\$0.000	
			Computer Hardware (Production)	\$2.100	\$2.100		
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$0.800	\$0.800	\$0.000	
			Replacement	\$0.800	\$0.800		
TOTAL FY 2018 CIP Program				\$6.200	\$6.200	\$0.000	

SUPPLY MANAGEMENT SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

DIVISION	NET		OPERATING	MOBILIZATION	TOTAL OBLIGATIONS	VARIABILITY TARGET	TARGET TOTAL	CAPITAL	CREDIT SALES
	CUSTOMER ORDERS	NET SALES						IMPROVEMENT PROGRAM	
BP21									
FY16	63.858	63.858	62.752	0.000	62.752	0.000	62.752	0.000	0.000
FY17	65.173	65.173	65.890	0.000	65.890	0.000	65.890	0.000	0.000
FY18	65.173	65.173	65.890	0.000	65.890	0.000	65.890	0.000	0.000
BP28									
FY16	770.391	770.391	713.417	0.000	713.417	0.000	713.417	0.000	0.000
FY17	718.327	718.327	718.327	0.000	718.327	0.000	718.327	0.000	4.888
FY18	737.303	737.303	737.303	0.000	737.303	0.000	737.303	0.000	4.888
BP34									
FY16	226.797	215.833	86.383	0.000	86.383	0.000	86.383	0.000	0.299
FY17	189.727	184.631	103.772	0.000	103.772	13.000	116.772	0.000	0.500
FY18	199.519	203.825	88.302	0.000	88.302	13.000	101.302	0.000	0.521
BP81									
FY16	1,123.465	1,150.413	1,172.731	0.000	1,172.731	0.000	1,172.731	0.000	9.290
FY17	1,254.854	1,295.942	1,649.437	0.000	1,649.437	176.000	1,825.437	0.000	12.000
FY18	1,362.214	1,366.767	1,227.317	0.000	1,227.317	176.000	1,403.317	0.000	12.000
BP85									
FY16	4,323.636	4,214.236	4,085.480	0.000	4,085.480	0.000	4,085.480	0.000	238.472
FY17	4,340.215	4,371.985	4,916.594	0.000	4,916.594	636.000	5,552.594	0.000	237.410
FY18	4,606.075	4,473.556	5,035.500	0.000	5,035.500	636.000	5,671.500	0.000	284.005
BP91									
FY16	0.000	404.902	1,207.573	0.000	1,207.573	0.000	1,207.573	4.943	0.000
FY17	0.000	437.948	1,388.500	0.000	1,388.500	0.000	1,388.500	8.000	0.000
FY18	0.000	459.922	1,390.392	0.000	1,390.392	0.000	1,390.392	6.200	0.000
TOTAL									
FY16	6,508.147	6,819.633	7,328.336	0.000	7,328.336	0.000	7,328.336	4.943	248.061
FY17	6,568.296	7,074.006	8,842.520	0.000	8,842.520	825.000	9,667.520	8.000	254.798
FY18	6,970.284	7,306.546	8,544.704	0.000	8,544.704	825.000	9,369.704	6.200	301.414

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 34
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2016

<u>Weapon System</u>	<u>NMCS Rates¹</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Total</u>
F/A-18 / EA-18G	6.4 / 8.5	5.026	6.762	4.174	15.962
AV-8B / T-45	9.6 / 5.4	0.000	0.000	0.150	0.150
EA-6B	9.4	0.000	0.000	5.528	5.528
VTUAV	n/a	1.219	0.000	2.126	3.345
V-22	4.7	0.752	0.000	7.134	7.886
C-130	7.6	0.884	0.000	0.002	0.886
P-3	5.9	0.009	0.000	0.000	0.009
P-8	6.6	0.913	0.000	0.155	1.068
E-2 / C-2	7.8 / 6.3	10.541	0.000	3.429	13.970
Common Systems	n/a	2.340	0.000	3.117	5.457
Aircraft Engines	n/a	0.643	0.000	1.593	2.236
Aviation Support Systems	n/a	0.000	0.000	13.179	13.179
RQ-21 UAS ¹	n/a	0.331	0.000	0.000	0.331
H-1	11.3	0.541	0.000	4.551	5.092
H-46	4.3	0.000	0.000	0.001	0.001
H-53	7.3	2.519	0.000	1.068	3.587
H-60	5.0	0.947	0.000	0.384	1.331
Multi-application	n/a	6.739	0.000	0.704	7.443
Efficiencies/Self Financing		(0.269)	0.000	(7.157)	(7.426)
Full PBL		0.000	0.000	6.264	6.264
Logistics Engineering Change Proposals		0.000	0.000	0.084	0.084
Total		33.135	6.762	46.486	86.383

¹Not 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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2017

<u>Weapon System</u>	<u>NMCS Rates¹</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Total</u>
F/A-18 / EA-18G	6.4 / 8.5	1.585	0.000	18.804	20.389
AV-8B / T-45	9.6 / 5.4	0.000	0.000	0.160	0.160
EA-6B	9.4	0.000	0.000	0.563	0.563
VTUAV	n/a	0.220	0.000	2.266	2.486
V-22	4.7	1.593	0.000	2.274	3.867
C-130	7.6	0.000	0.000	0.002	0.002
P-3	5.9	0.047	0.000	0.166	0.213
P-8	6.6	9.193	0.000	3.654	12.847
E-2 / C-2	7.8 / 6.3	2.570	0.000	2.256	4.826
Common Systems	n/a	0.856	0.000	4.894	5.750
Aircraft Engines	n/a	0.000	0.000	17.019	17.019
Aviation Support Systems	n/a	2.973	0.000	3.784	6.757
RQ-21 UASI	n/a	0.333	0.000	0.000	0.333
H-1	11.3	4.437	0.000	1.138	5.575
H-46	4.3	0.000	0.000	0.001	0.001
H-53	7.3	0.000	0.000	0.409	0.409
H-60	5.0	3.616	0.000	1.815	5.431
Multi-application	n/a	0.000	0.000	0.220	0.220
Efficiencies/Self Financing		(0.533)	0.000	7.157	6.624
Full PBL		0.000	0.000	8.200	8.200
Logistics Engineering Change Proposals		0.000	0.000	2.100	2.100
Total		26.890	0.000	76.882	103.772

¹Not 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) 2018 BUDGET ESTIMATES
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FY 2018

<u>Weapon System</u>	<u>NMCS Rates¹</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Total</u>
F/A-18 / EA-18G	6.4 / 8.5	0.994	0.000	18.368	19.362
AV-8B / T-45	9.6 / 5.4	0.000	0.000	0.203	0.203
EA-6B	9.4	0.000	0.000	0.717	0.717
VTUAV	n/a	0.310	0.000	3.164	3.474
V-22	4.7	0.000	0.000	2.894	2.894
C-130	7.6	0.000	0.000	0.003	0.003
P-3	5.9	0.046	0.000	0.211	0.257
P-8	6.6	0.552	0.000	4.650	5.202
E-2 / C-2	7.8 / 6.3	3.367	0.000	2.871	6.238
Common Systems	n/a	0.462	0.000	6.229	6.691
Aircraft Engines	n/a	0.000	0.000	21.660	21.660
Aviation Support Systems	n/a	0.000	0.000	4.816	4.816
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000
H-1	11.3	1.499	0.000	1.448	2.947
H-46	4.3	0.000	0.000	0.001	0.001
H-53	7.3	0.000	0.000	0.520	0.520
H-60	5.0	2.719	0.000	2.310	5.029
Multi-application	n/a	0.000	0.000	0.309	0.309
Efficiencies/Self Financing		(0.221)	0.000	0.000	(0.221)
Full PBL		0.000	0.000	8.200	8.200
Logistics Engineering Change Proposals		0.000	0.000	0.000	0.000
Total		9.728	0.000	78.574	88.302

¹Not 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) 2018 BUDGET ESTIMATES
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FY 2016

<u>Weapon System</u>	<u>Basic</u> <u>Replen</u>	<u>Outfitting</u>	<u>Special</u> <u>Programs</u>	<u>Rework</u>	<u>Total</u>
AMPHIBIOUS	0.300	1.000	0.369	3.473	5.142
NUCLEAR	92.141	11.118	28.502	9.020	140.781
SUBSAFE LI/ASDS/DSSP	31.455	0.504	13.620	13.356	58.935
EXPEDITIONARY	0.500	0.000	19.897	2.403	22.800
COMMON ELECTRIC	42.109	4.372	47.296	47.746	141.523
COMMON HM&E	0.706	3.082	93.994	57.853	155.635
CRUDES	69.499	15.929	39.624	114.279	239.331
LITTORAL	0.874	0.208	20.199	6.542	27.823
SUBMARINE	1.478	3.239	95.854	79.302	179.873
CVN	0.262	1.022	27.134	16.056	44.474
FULL PBL	37.248	0.000	0.000	119.166	156.414
Total	276.572	40.474	386.489	469.196	1,172.731

<u>Platform</u>	<u>FY16 POTF</u>	
AIRCRAFT CARRIERS	77%	* 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. FY16 POTF is based on actuals.
AMPHIBIOUS WARFARE	39%	
COMBAT LOGISTICS SHIPS	0%	
MINE WARFARE SHIPS	26%	
SUBMARINES (SSN)	97%	
SUBMARINES (SSBN)	100%	
SUBMARINES (SSGN)	95%	
LITTORAL	33%	
SURFACE COMBATANTS	50%	
MISCELLANEOUS	74%	
ACROSS ALL PLATFORMS	63%	

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 81
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
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(DOLLARS IN MILLIONS)
FY 2017

<u>Weapon System</u>	<u>Basic Replen</u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Rework</u>	<u>Total</u>
AMPHIBIOUS	0.996	3.606	2.224	5.266	12.092
NUCLEAR	106.456	11.344	7.400	8.000	133.200
SUBSAFE LI/ASDS/DSSP	32.125	0.504	27.128	9.200	68.957
EXPEDITIONARY	37.113	0.000	31.021	4.144	72.278
COMMON ELECTRIC	20.627	20.397	63.959	41.611	146.594
COMMON HM&E	128.146	5.456	87.558	87.991	309.151
CRUDES	173.367	16.374	29.106	176.391	395.238
LITTORAL	25.318	0.317	14.650	10.678	50.963
SUBMARINE	80.916	1.769	58.623	116.345	257.653
CVN	45.980	1.965	32.350	13.005	93.300
FULL PBL	25.253	0.000	0.000	84.758	110.011
Total	676.297	61.732	354.019	557.389	1,649.437

<u>Platform</u>	<u>FY17 POTF</u>	
AIRCRAFT CARRIERS	82%	* 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 projections are carried forward from FY16.
AMPHIBIOUS WARFARE	39%	
COMBAT LOGISTICS SHIPS	N/A	
MINE WARFARE SHIPS	20%	
SUBMARINES (SSN)	93%	
SUBMARINES (SSBN)	100%	
SUBMARINES (SSGN)	90%	
LITTORAL	37%	
SURFACE COMBATANTS	49%	
MISCELLANEOUS	70%	
ACROSS ALL PLATFORMS	62%	

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 81
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2018

<u>Weapon System</u>	<u>Basic Replen</u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Rework</u>	<u>Total</u>
AMPHIBIOUS	1.077	5.693	0.000	7.091	13.861
NUCLEAR	117.014	11.536	12.263	8.639	149.452
SUBSAFE LI/ASDS/DSSP	64.298	0.756	3.282	9.935	78.271
EXPEDITIONARY	25.446	0.000	12.949	3.348	41.743
COMMON ELECTRIC	17.592	18.743	48.889	53.023	138.247
COMMON HM&E	21.469	1.965	53.446	76.530	153.410
CRUDES	70.806	17.376	15.654	150.299	254.135
LITTORAL	5.628	15.017	9.606	8.557	38.808
SUBMARINE	33.845	2.223	55.388	86.825	178.281
CVN	7.211	0.353	33.338	11.188	52.090
FULL PBL	31.936	0.000	0.000	97.083	129.019
Total	396.322	73.662	244.815	512.518	1,227.317

<u>Platform</u>	<u>FY18 POTF</u>	
AIRCRAFT CARRIERS	82%	* 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 FY16.
AMPHIBIOUS WARFARE	39%	
COMBAT LOGISTICS SHIPS	N/A	
MINE WARFARE SHIPS	20%	
SUBMARINES (SSN)	93%	
SUBMARINES (SSBN)	100%	
SUBMARINES (SSGN)	90%	
LITTORAL	37%	
SURFACE COMBATANTS	49%	
MISCELLANEOUS	70%	
ACROSS ALL PLATFORMS	62%	

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 85
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
APRIL 2017
(DOLLARS IN MILLIONS)
FY 2016

<u>Weapon System</u>	NMCS <u>Rates</u> ¹	Buy-in <u>Outfitting</u>	Special <u>Programs</u>	Basic <u>Replen</u>	<u>Repair</u>	<u>Total</u>
F/A-18 / EA-18G	6.4 / 8.5	77.917	510.398	37.347	484.791	1,110.453
AV-8B / T-45	9.6 / 5.4	0.000	0.000	22.084	78.533	100.617
EA-6B	9.4	0.000	0.000	6.961	20.230	27.191
VTUAV	n/a	18.779	0.000	0.000	2.962	21.741
V-22	4.7	11.262	36.126	6.841	151.875	206.104
C-130	7.6	13.292	0.000	1.852	5.043	20.187
P-3	5.9	0.945	0.000	5.370	46.764	53.079
P-8	6.6	169.692	0.000	44.456	26.611	240.759
E-2 / C-2	7.8 / 6.3	10.787	17.663	9.135	42.278	79.863
Common Systems	n/a	11.279	0.000	7.005	59.207	77.491
Aircraft Engines	n/a	0.000	0.000	16.240	137.686	153.926
Aviation Support Systems	n/a	0.000	0.000	1.530	28.829	30.359
RQ-21 UASI	n/a	5.089	0.000	0.000	0.000	5.089
H-1	11.3	46.859	0.000	6.703	68.899	122.461
H-46	4.3	0.000	0.000	1.951	0.000	1.951
H-53	7.3	0.000	0.000	14.375	148.269	162.644
H-60	5.0	118.183	0.000	3.880	47.009	169.072
Multi-application	n/a	0.000	0.000	(0.145)	303.915	303.770
Initiatives (SHORCAL Iwakuni)		(89.312)	0.000	0.000	0.000	(89.312)
Efficiencies/Self Financing		118.578	0.000	0.000	0.000	118.578
Carcass Losses		0.000	0.000	18.000	0.000	18.000
Full PBL		0.000	0.000	11.777	1,159.787	1,171.564
LECP Investment/Savings		0.000	0.000	(2.326)	(17.781)	(20.107)
Total		513.350	564.187	213.036	2,794.907	4,085.480

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OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 85
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
APRIL 2017
(DOLLARS IN MILLIONS)
FY 2017

<u>Weapon System</u>	NMCS <u>Rates</u> ¹	Buy-in <u>Outfitting</u>	Special <u>Programs</u>	Basic <u>Replen</u>	<u>Repair</u>	<u>Total</u>
F/A-18 / EA-18G	6.4 / 8.5	27.483	749.925	72.180	617.786	1,467.374
AV-8B / T-45	9.6 / 5.4	0.000	0.000	14.629	100.045	114.674
EA-6B	9.4	0.000	0.000	11.879	34.699	46.578
VTUAV	n/a	3.754	0.000	0.075	4.749	8.578
V-22	4.7	27.164	29.650	12.937	210.923	280.674
C-130	7.6	0.000	0.000	3.540	6.877	10.417
P-3	5.9	0.817	0.000	11.887	60.894	73.598
P-8	6.6	154.351	0.000	16.354	90.842	261.547
E-2 / C-2	7.8 / 6.3	59.695	45.386	12.363	57.657	175.101
Common Systems	n/a	14.603	0.000	9.019	80.745	104.367
Aircraft Engines	n/a	0.000	6.674	32.578	187.772	227.024
Aviation Support Systems	n/a	20.926	0.000	4.398	39.316	64.640
RQ-21 UASI	n/a	5.726	0.000	0.000	0.000	5.726
H-1	11.3	75.644	0.000	12.989	93.962	182.595
H-46	4.3	0.000	0.000	0.000	0.000	0.000
H-53	7.3	0.000	0.000	26.780	202.205	228.985
H-60	5.0	60.502	0.000	7.391	79.686	147.579
Multi-application	n/a	0.000	0.000	83.172	227.991	311.163
Initiatives (SHORCAL Iwakuni)		(50.625)	0.000	0.000	0.000	(50.625)
Efficiencies/Self Financing		0.000	0.000	0.000	0.000	0.000
Carcass Losses		0.000	0.000	18.000	0.000	18.000
Full PBL		0.000	0.000	12.000	1,220.400	1,232.400
LECP Investment/Savings		0.000	0.000	14.642	(8.443)	6.199
Total		400.040	831.635	376.813	3,308.106	4,916.594

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**OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BP 85**

FISCAL YEAR (FY) 2018 PROGRAM / BUDGET SUBMISSION TO OSD / OMB

APRIL 2017

(DOLLARS IN MILLIONS)

FY 2018

<u>Weapon System</u>	<u>NMCS Rates¹</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
F/A-18 / EA-18G	6.4 / 8.5	189.863	457.805	109.494	636.746	1,393.908
AV-8B / T-45	9.6 / 5.4	0.000	0.000	13.855	86.717	100.572
EA-6B	9.4	0.000	0.000	19.951	24.809	44.760
VTUAV	n/a	6.595	0.000	0.000	4.116	10.711
V-22	4.7	90.000	5.190	16.928	200.675	312.793
C-130	7.6	0.000	0.000	4.630	5.961	10.591
P-3	5.9	0.973	0.000	18.409	52.782	72.164
P-8	6.6	32.425	0.000	41.111	82.102	155.638
E-2 / C-2	7.8 / 6.3	102.472	6.307	29.054	49.976	187.809
Common Systems	n/a	30.849	0.000	13.639	69.989	114.477
Aircraft Engines	n/a	90.000	0.000	52.146	177.119	319.265
Aviation Support Systems	n/a	0.000	0.000	6.652	34.078	40.730
RQ-21 UAS	n/a	0.000	0.000	0.000	0.000	0.000
H-1	11.3	31.917	0.000	20.261	81.445	133.623
H-46	4.3	0.000	0.000	0.000	0.000	0.000
H-53	7.3	36.000	0.000	41.540	191.927	269.467
H-60	5.0	109.951	0.000	10.803	47.401	168.155
Multi-application	n/a	99.000	0.000	141.298	287.290	527.588
Efficiencies/Self Financing		(42.267)	0.000	0.000	0.000	(42.267)
Carcass Losses		0.000	0.000	18.000	0.000	18.000
Full PBL		0.000	0.000	12.000	1,180.756	1,192.756
LECP Investment/Savings		0.000	0.000	16.586	(11.826)	4.760
Total		777.778	469.302	586.357	3,202.063	5,035.500

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INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BUDGET PROJECT SUMMARY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2016

	Total	Mobilization	Operating	Other
1. INVENTORY BOP	50,535.037	0.000	26,802.802	23,732.235
2. BOP INVENTORY ADJUSTMENTS	1,810.511	0.000	5,310.604	(3,500.093)
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	4,205.263	(4,205.263)
B. PRICE CHANGE AMOUNT (memo)	1,810.509	0.000	1,105.339	705.170
C. INVENTORY RECLASSIFIED AND REPRICED	52,345.548	0.000	32,113.406	20,232.142
3. RECEIPTS AT STANDARD	3,266.369	0.000	3,207.514	58.855
4. SALES AT STANDARD	6,662.792	0.000	6,662.792	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	2,805.816	0.000	2,696.157	109.659
B. RETURNS FROM CUSTOMERS FOR CREDIT	248.061	0.000	235.718	12.343
C. RETURNS FROM CUSTOMERS, NO CREDIT	14,320.372	0.000	7,201.488	7,118.884
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(1,468.218)	0.000	0.000	(1,468.218)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(190.546)	0.000	(16.646)	(173.900)
G. OTHER (listed in Section 9)	(14,818.367)	0.000	(12,132.396)	(2,685.971)
H. TOTAL ADJUSTMENTS	897.118	0.000	(2,015.679)	2,912.797
6. INVENTORY EOP	49,846.243	0.000	26,642.449	23,203.794
7. INVENTORY EOP (REVALUED)	31,427.108	0.000	17,772.186	13,654.922
A. APPROVED ACQUISITION OBJECTIVE (memo)				10,816.630
B. ECONOMIC RETENTION (memo)				1,260.731
C. CONTINGENCY RETENTION (memo)				1,549.277
D. POTENTIAL DOD REUTILIZATION (memo)				28.284
8. INVENTORY ON ORDER EOP (memo)	2,520.951	0.000	2,520.951	0.000
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(2,919.818)	0.000	(3,065.508)	145.690
Strata Transfers	0.000	0.000	2,831.661	(2,831.661)
Net/Standard Difference	(11,898.549)	0.000	(11,898.549)	0.000
Total	(14,818.367)	0.000	(12,132.396)	(2,685.971)

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BUDGET PROJECT SUMMARY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2017

	Total	Mobilization	Operating	Other
1. INVENTORY BOP	49,846.243	0.000	26,642.449	23,203.794
2. BOP INVENTORY ADJUSTMENTS	2,363.774	0.000	5,545.571	(3,181.797)
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	4,200.763	(4,200.763)
B. PRICE CHANGE AMOUNT (memo)	2,363.773	0.000	1,344.807	1,018.966
C. INVENTORY RECLASSIFIED AND REPRICED	52,210.016	0.000	32,188.019	20,021.997
3. RECEIPTS AT STANDARD	2,806.986	0.000	2,803.617	3.369
4. SALES AT STANDARD	6,890.856	0.000	6,890.856	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	148.919	0.000	126.096	22.823
B. RETURNS FROM CUSTOMERS FOR CREDIT	254.798	0.000	243.734	11.064
C. RETURNS FROM CUSTOMERS, NO CREDIT	18,841.885	0.000	10,375.173	8,466.712
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(3,297.939)	0.000	0.000	(3,297.939)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(5.922)	0.000	(5.916)	(0.006)
G. OTHER (listed in Section 9)	(12,303.596)	0.000	(11,443.836)	(859.760)
H. TOTAL ADJUSTMENTS	3,638.145	0.000	(704.749)	4,342.894
6. INVENTORY EOP	51,743.136	0.000	27,396.031	24,368.260
7. INVENTORY EOP (REVALUED)	31,713.804	0.000	17,744.544	13,969.260
A. APPROVED ACQUISITION OBJECTIVE (memo)				11,081.456
B. ECONOMIC RETENTION (memo)				1,274.469
C. CONTINGENCY RETENTION (memo)				1,584.340
D. POTENTIAL DOD REUTILIZATION (memo)				28.996
8. INVENTORY ON ORDER EOP (memo)	2,841.722	0.000	2,841.722	0.000
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(88.111)	0.000	(80.771)	(7.340)
Strata Transfers	0.000	0.000	1,162.754	(1,162.754)
Net/Standard Difference	(12,215.485)	0.000	(12,215.485)	0.000
Total	(12,303.596)	0.000	(11,133.502)	(1,170.094)

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - NAVY
BUDGET PROJECT SUMMARY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2018

	Total	Mobilization	Operating	Other
1. INVENTORY BOP	51,957.606	0.000	27,589.346	24,368.260
2. BOP INVENTORY ADJUSTMENTS	45.671	0.000	4,308.788	(4,263.117)
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	4,200.764	(4,200.764)
B. PRICE CHANGE AMOUNT (memo)	45.671	0.000	108.024	(62.353)
C. INVENTORY RECLASSIFIED AND REPRICED	51,809.962	0.000	31,704.819	20,105.143
3. RECEIPTS AT STANDARD	3,615.153	0.000	3,611.898	3.255
4. SALES AT STANDARD	7,148.038	0.000	7,148.038	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	49.903	0.000	68.715	(18.812)
B. RETURNS FROM CUSTOMERS FOR CREDIT	301.414	0.000	275.261	26.153
C. RETURNS FROM CUSTOMERS, NO CREDIT	20,097.696	0.000	11,105.129	8,992.567
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(3,307.270)	0.000	0.000	(3,307.270)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(25.569)	0.000	(25.563)	(0.006)
G. OTHER (listed in Section 9)	(13,623.481)	0.000	(11,990.891)	(1,632.590)
H. TOTAL ADJUSTMENTS	3,492.693	0.000	(567.349)	4,060.042
6. INVENTORY EOP	51,769.772	0.000	27,601.331	24,168.441
7. INVENTORY EOP (REVALUED)	31,381.158	0.000	17,804.346	13,576.812
A. APPROVED ACQUISITION OBJECTIVE (memo)				10,733.489
B. ECONOMIC RETENTION (memo)				1,251.600
C. CONTINGENCY RETENTION (memo)				1,564.627
D. POTENTIAL DOD REUTILIZATION (memo)				27.098
8. INVENTORY ON ORDER EOP (memo)	2,764.379	0.000	2,671.619	92.760
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(182.944)	0.000	(173.793)	(9.151)
Strata Transfers	0.000	0.000	1,575.285	(1,575.285)
Net/Standard Difference	(13,562.042)	0.000	(13,562.042)	0.000
Total	(13,744.986)	0.000	(12,160.550)	(1,584.436)

12. Marine Corps Supply

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**DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017**

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. The MC SMAG is divided into four Budget Projects to organize the financial operation of the fund.

	Budget Project
Wholesale	
Depot Level Reparables	BP84
Retail	
Consumable Retail Centrally Managed/Direct Support Stock Control	BP28
Fuel	BP38
Operations	
Cost of Operations	BP91

Activity Group Composition:

<u>Activity</u>	<u>Location</u>
Weapon System Management Center	Albany, Georgia
Direct Support Stock Control	Barstow, California

**DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017**

Significant Changes Since the FY 2017 President’s Budget:

In FY 2016, the Consolidated Material and Service Center at Camp Pendleton completed transition to General Services Administration (GSA) and was removed from the above Activity Group Composition listing. The MC SMAG retail operations gross sales and obligations declined in FY 2016 and are projected to continue this trend through FY 2018 due to the Marine Corps transitioning many of its supply operation functions to the 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.

Financial Profile:

<u>Revenue/Expense/Operating Results (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Net Revenue	\$108.3	\$100.7	\$101.5
Expense	<u>\$103.3</u>	<u>\$101.6</u>	<u>\$101.0</u>
Operating Results	\$5.0	(\$0.9)	\$0.5
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	\$5.0	(\$0.9)	\$0.5
Prior Year AOR	(\$4.5)	\$0.5	(\$0.5)
Accumulated Operating Results (AOR)	<u>\$0.5</u>	<u>(\$0.5)</u>	<u>\$0.0</u>

Note: Amounts may not add due to rounding.

Revenue and Expenses: FY 2016 revenue and expenses are based on actuals. Annual revenue and expenses fluctuate from FY 2017 to FY 2018 based on projected demand from the operating forces. This is primarily due to an increase in SMAG’s unfilled orders from FY 2016 to FY 2017 along with recouping prior year losses in FY 2018 which 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 completion of Overseas Contingency Operations (OCO) funded reset workload.

Operating Results: Net Operating Result (NOR) 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 Accumulated Operating Result (AOR) in FY 2018.

Narrative

**DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017**

Obligations:

<u>Obligation Authority (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Wholesale	\$70.1	\$99.4	\$99.4
Retail	\$1.8	\$1.9	\$1.5
Total	\$71.9	\$101.3	\$100.9

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. FY 2016 obligations reflect actuals. The increase in FY 2017 is due to projected trends in demand, resulting from operating forces and increased unfilled orders. FY 2018 OA is consistent with FY 2017.

Retail: OA for retail operations decreases from FY 2017 to FY 2018 as a result of the transition from the Marine Corps to GSA.

<u>Collections/Disbursement/Outlays (\$Millions):</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Collections	\$104.4	\$98.4	\$86.2
Disbursements	\$70.6	\$73.6	\$73.8
Transfers (CIT Reimbursement)	\$0.0	\$0.0	\$0.0
Outlays (Incorporates CIT)	\$33.8	\$24.8	\$12.4

Note: Amounts may not add due to rounding.

Collections: FY 2016 collections reflect actuals. FY 2017 and FY 2018 collections are based on revenue projections.

Disbursements: FY 2016 disbursements reflect actual expenditures supporting the operating forces for material, supplies and DLA transportation cost. FY 2017 and FY 2018 disbursements remain consistent.

<u>Sales:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Wholesale	\$105.2	\$101.7	\$103.3
Retail	\$4.2	\$1.9	\$1.2
Total	\$109.4	\$103.6	\$104.5

Note: Amounts may not add due to rounding.

Wholesale: Gross sales fluctuates across the budget years due to changes in operating tempo and projected customer demands and recouping operating losses.

Narrative

**DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017**

Retail: Sales from retail operations declines throughout the budget as the transition to GSA is finalized.

<u>Metrics:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
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

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
<u>Undelivered Orders (\$Millions):</u>	\$56.2	\$55.6	\$71.3

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.

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.

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Supply Material Availability	63%	66%	70%

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.

<u>Unit Cost:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Wholesale	0.677	1.006	0.992
Retail	0.431	1.001	1.001

Unit Cost: Unit cost provides cost per unit sold based on total cost and the total anticipated number of sales. Unit cost can change in the year of execution based on the relationship between obligations and sales.

Narrative

**DEPARTMENT OF THE NAVY
NAVY WORKING CAPITAL FUND
SUPPLY MANAGEMENT – MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017**

<u>Composite Rates:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Annual Price Change (APC)	5.210%	-3.890%	-2.250%
Composite Cost Recovery Rate (CRR)	27.890%	20.150%	17.170%

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 replace inventory losses. The FY 2018 CRR decreases due to supplier costs coupled with increased demand for Marine Corps managed assets. The CRR is tied to customer funding and Marine Corps Weapons Systems Support's ability to fill customer orders.

Staffing:

<u>Civilian/Military ES & Workyears:</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Civilian End Strength	26	26	26
Civilian Workyears (straight time)	23	26	26
Military End Strength	0	0	0
Military Workyears	0	0	0

Civilian staffing remains constant and provides continuous support.

Capital Investment Program (CIP):

MC SMAG does not have a CIP budget request.

REVENUE AND EXPENSE SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Revenue:			
Gross Sales			
Operations	109.4	103.6	104.5
Capital Surcharge	0.0	0.0	0.0
Depreciation except Maj Const	0.0	0.0	0.0
Total Gross Sales	109.4	103.6	104.5
Major Construction Dep	0.0	0.0	0.0
Other Income	0.0	0.0	0.0
Refunds/Discounts (- Credit Sales)	(1.1)	(2.9)	(3.0)
TOTAL INCOME	108.3	100.7	101.5
Expenses:			
Cost of Material Sold from Inventory	89.5	87.5	86.8
Salaries and Wages:			
Military Personnel	0.0	0.0	0.0
Civilian Personnel	2.0	2.6	2.6
Travel & Transportation of Personnel	0.0	0.1	0.1
Materials & Supplies	0.0	0.0	0.0
Equipment	0.0	0.0	0.0
Other Purchases from Revolving Funds	10.9	10.2	10.2
Transportation of Things	0.0	0.1	0.1
Depreciation - Capital	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	0.0	0.0	0.0
Other Purchased Services	0.8	1.3	1.3
TOTAL EXPENSES	103.3	101.6	101.0
Operating Result	5.0	(0.9)	0.5
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	5.0	(0.9)	0.5
Prior Year AOR	(4.5)	0.5	(0.5)
Other Changes Affecting AOR	0.0	0.0	0.0
Accumulated Operating Result	0.5	(0.5)	(0.0)

**SOURCES OF NEW ORDERS AND REVENUE
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)**

	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
1. New Orders			
a. Orders from DoD Components:			
Dept of the Navy			
Military Personnel, Marine Corps	-	-	-
O&M Marine Corps	85.7	70.8	78.0
O&M Marine Corps Reserve	-	-	-
O&M, Navy	0.0	0.1	0.1
Navy Working Capital Fund	15.4	12.3	19.2
Other Services (O&M)	-	-	-
Army	4.2	4.2	8.0
Air Force	0.3	0.6	0.7
Other DoD	-	-	-
Subtotal	105.7	87.9	105.9
b. Orders from other Fund Buisness Areas:			
Logistics Support	-	-	-
c. Total DoD	105.7	87.9	105.9
d. Other Orders:			
Other Federal Agencies	-	-	-
Trust Fund	-	-	-
Non-Federal Agencies *	-	-	-
Foreign Military Sales (FMS)	3.0	3.9	4.4
		-	-
Total New Orders	108.7	91.8	110.2
2. Carry-In Orders	28.7	28.1	16.3
3. Total Gross Orders	137.5	119.9	126.5
4. Carry-Out Orders (-)	28.1	16.3	22.0
5. Gross Sales	109.4	103.6	104.5
Reimbursable Orders (BP 91)	13.8	14.2	14.2
6. Credit (-)	1.1	2.9	3.0
7. Net Sales	108.3	100.7	101.4

* Non-federal agencies line includes cash sales

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FUEL DATA
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

FY	PRODUCT	PROCURED FROM DLA ENERGY			PROCURED BY SERVICE			STABILIZED PRICE (\$)
		BARRELS	U/P	EXT COST	BARRELS	U/P	EXT COST	
2016	Jet Fuel: JP-8	0.000	0.00	0.000	0.000	0.00	0.000	0.000
	Propane	0.000	0.00	0.000	0.000	0.00	0.000	
	Natural Gas (CNG)	0.000	0.00	0.000	-0.003	63.00	-0.183	
	TOTAL	0.000		0.000	-0.006		-0.183	
2017	Jet Fuel: JP-8	0.000	0.00	0.000	0.000	0.00	0.000	0.000
	Propane	0.000	0.00	0.000	0.000	0.00	0.000	
	Natural Gas (CNG)	0.000	0.00	0.000	0.000	0.00	0.000	
	TOTAL	0.000		0.000	0.000		0.000	
2018	Jet Fuel: JP-8	0.000	0.00	0.000	0.000	0.00	0.000	0.000
	Propane	0.000	0.00	0.000	0.000	0.00	0.000	
	Natural Gas (CNG)	0.000	0.00	0.000	0.000	0.00	0.000	
	TOTAL	0.000		0.000	0.000		0.000	

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SUPPLY MANAGEMENT SUMMARY
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

DIVISION	NET CUSTOMER ORDERS	NET SALES	OPERATING	MOBILIZATION	TOTAL OBLIGATIONS	VARIABILITY TARGET	TARGET TOTAL	CAPITAL IMPROVEMENT PROGRAM	CREDIT SALES
BP 28 RCM									
FY 2016	1.7	3.3	1.6	0.0	1.6	20.0	21.6	0.0	0.0
FY 2017	1.3	1.7	1.7	0.0	1.7	20.0	21.7	0.0	0.0
FY 2018	1.2	1.2	1.2	0.0	1.5	20.0	21.2	0.0	0.0
BP 28 DSSC									
FY 2016	0.9	0.9	0.4	0.0	0.4	0.0	0.4	0.0	0.0
FY 2017	0.3	0.3	0.3	0.0	0.3	0.0	0.3	0.0	0.0
FY 2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BP 38									
FY 2016	0.0	0.0	(0.2)	0.0	(0.2)	0.0	(0.2)	0.0	0.0
FY 2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY 2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BP 84									
FY 2016	105.0	104.1	56.3	0.0	56.3	15.7	72.0	0.0	1.1
FY 2017	98.1	98.8	85.2	0.0	85.2	14.5	99.6	0.0	2.9
FY 2018	106.0	100.3	85.2	0.0	85.2	13.8	83.9	0.0	2.9
BP 91									
FY 2016	0.0	0.0	13.8	0.0	13.8	0.0	13.8	0.0	0.0
FY 2017	0.0	0.0	14.2	0.0	14.2	0.0	14.2	0.0	0.0
FY 2018	0.0	0.0	14.2	0.0	14.2	0.0	14.2	0.0	0.0
TOTAL									
FY 2016	107.7	108.3	71.9	0.0	71.9	35.7	107.6	0.0	1.1
FY 2017	99.7	100.7	101.3	0.0	101.3	34.5	135.7	0.0	2.9
FY 2018	107.2	101.5	100.6	0.0	100.9	33.8	119.4	0.0	3.0

OPERATING REQUIREMENTS BY WEAPON SYSTEM
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
BP 84 - WHOLESALE
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2016

<u>Weapon System Name</u>	<u>NMCRS Rates*</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
TOTAL COMMUNICATION AND ELECTRONICS	5.0	0.0	0.0	8.2	35.9	44.2
TOTAL ORDNANCE TANK AUTOMOTIVE	5.0	0.0	0.0	1.9	0.7	2.7
TOTAL GUIDED MISSILES AND EQUIPMENT	5.0	0.0	0.0	(1.8)	0.1	(1.7)
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	5.0	0.0	0.0	2.6	0.0	2.6
TOTAL GENERAL PROPERTY	5.0	0.0	0.0	4.7	3.9	8.6
TOTAL		0.0	0.0	15.7	40.6	56.3

*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 - WHOLESALE
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2017

<u>Weapon System Name</u>	<u>NMCRS Rates*</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
TOTAL COMMUNICATION AND ELECTRONICS	5.0	0.0	0.0	17.4	31.8	49.2
TOTAL ORDNANCE TANK AUTOMOTIVE	5.0	0.0	0.0	1.9	4.5	6.4
TOTAL GUIDED MISSILES AND EQUIPMENT	5.0	0.0	0.0	0.9	1.8	2.7
CONSTRUCTION	5.0	0.0	0.0	4.7	5.7	10.4
TOTAL GENERAL PROPERTY	5.0	0.0	0.0	2.7	13.8	16.5
TOTAL		0.0	0.0	27.6	57.6	85.2

*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 - WHOLESALE
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2018

<u>Weapon System Name</u>	<u>NMCRS Rates*</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
TOTAL COMMUNICATION AND ELECTRONICS	5.0	0.0	0.0	17.4	31.8	49.2
TOTAL ORDNANCE TANK AUTOMOTIVE	5.0	0.0	0.0	1.9	4.5	6.4
TOTAL GUIDED MISSILES AND EQUIPMENT	5.0	0.0	0.0	0.9	1.8	2.7
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	5.0	0.0	0.0	4.7	5.7	10.4
TOTAL GENERAL PROPERTY	5.0	0.0	0.0	2.7	13.8	16.5
TOTAL		0.0	0.0	27.6	57.6	85.2

*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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2016

<u>Weapon System Name</u>	<u>NMCRS Rates*</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
TOTAL COMMUNICATION AND ELECTRONICS	0.0	0.0	0.0	0.2	0.0	0.2
TOTAL ORDNANCE TANK AUTOMOTIVE	0.0	0.0	0.0	1.2	0.0	1.2
TOTAL GUIDED MISSILES AND EQUIPMENT	0.0	0.0	0.0	0.1	0.0	0.1
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL GENERAL PROPERTY	0.0	0.0	0.0	0.1	0.0	0.1
						0.0
TOTAL	0.0	0.0	0.0	1.6	0.0	1.6

*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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2017

<u>Weapon System Name</u>	<u>NMCRS Rates*</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
TOTAL COMMUNICATION AND ELECTRONICS	0.0	0.0	0.0	0.2	0.0	0.2
TOTAL ORDNANCE TANK AUTOMOTIVE	0.0	0.0	0.0	0.9	0.0	0.9
TOTAL GUIDED MISSILES AND EQUIPMENT	0.0	0.0	0.0	0.2	0.0	0.2
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.0	0.0	0.0	0.2	0.0	0.2
TOTAL GENERAL PROPERTY	0.0	0.0	0.0	0.2	0.0	0.2
TOTAL	0.0	0.0	0.0	1.7	0.0	1.7

*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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2018

<u>Weapon System Name</u>	<u>NMCRS Rates*</u>	<u>Buy-in Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
TOTAL COMMUNICATION AND ELECTRONICS	0.0	0.0	0.0	0.4	0.0	0.4
TOTAL ORDNANCE TANK AUTOMOTIVE	0.0	0.0	0.0	0.8	0.0	0.8
TOTAL GUIDED MISSILES AND EQUIPMENT	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL ENGINEER SUPPORT AND CONSTRUCTION	0.0	0.0	0.0	0.1	0.0	0.1
TOTAL GENERAL PROPERTY	0.0	0.0	0.0	0.1	0.0	0.1
TOTAL	0.0	0.0	0.0	1.5	0.0	1.5

*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
SUMMARY OF WHOLESALE AND RETAIL
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES

MAY 2017
(DOLLARS IN MILLIONS)

FY 2016

	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	1,272.5	33.4	1,239.1	0.0
2. BOP INVENTORY ADJUSTMENTS	0.0	0.0	0.0	0.0
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	0.0	0.0
B. PRICE CHANGE AMOUNT (memo)	0.0	0.0	0.0	0.0
C. INVENTORY RECLASSIFIED AND REPRICED	1,272.5	33.4	1,239.1	0.0
3. RECEIPTS AT STANDARD	43.5	0.0	43.3	0.0
4. SALES AT STANDARD	165.1	0.0	165.1	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(172.7)	(0.1)	(172.6)	0.0
B. RETURNS FROM CUSTOMERS FOR CREDIT	1.1	0.0	1.1	0.0
C. RETURNS FROM CUSTOMERS, NO CREDIT	377.2	0.0	377.2	0.0
D. RETURNS TO SUPPLIERS (-)	(102.3)	0.0	(102.3)	0.0
E. TRANSFERS TO PROP. DISPOSAL (-)	(168.8)	0.0	96.8	0.0
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(44.5)	0.0	28.1	0.0
G. OTHER (listed in Section 9)	290.8	1.9	288.9	0.0
H. TOTAL ADJUSTMENTS	180.9	1.9	179.0	0.0
6. INVENTORY EOP	1,331.5	35.2	1,296.2	0.0
7. INVENTORY EOP (REVALUED)	1,105.4	34.1	1,071.3	0.0
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.0
B. ECONOMIC RETENTION (memo)				172.0
C. CONTINGENCY RETENTION (memo)				229.9
D. POTENTIAL DOD REUTILIZATION (memo)				1.6
8. INVENTORY ON ORDER EOP (memo)	56.2	0.0	56.2	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	291.7	1.9	289.7	0.0
Strata Transfers	0.0	0.0	0.0	0.0
Net/Standard Difference	0.0	0.0	0.0	0.0
Total	291.7	1.9	289.7	0.0

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
SUMMARY OF WHOLESALE AND RETAIL
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES

MAY 2017

(DOLLARS IN MILLIONS)

FY 2017

	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	1,331.5	35.2	1,296.2	0.0
2. BOP INVENTORY ADJUSTMENTS	(31.7)	0.4	(19.4)	(12.6)
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	0.0	0.0
B. PRICE CHANGE AMOUNT (memo)	(31.7)	0.4	(19.4)	(12.6)
C. INVENTORY RECLASSIFIED AND REPRICED	1,516.4	35.5	1,042.5	408.3
3. RECEIPTS AT STANDARD	29.6	0.0	29.7	0.0
4. SALES AT STANDARD	144.5	0.0	144.5	0.0
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(2.4)	0.0	(2.4)	0.0
B. RETURNS FROM CUSTOMERS FOR CREDIT	2.9	0.0	2.9	0.0
C. RETURNS FROM CUSTOMERS, NO CREDIT	231.6	0.0	231.6	0.0
D. RETURNS TO SUPPLIERS (-)	(73.3)	0.0	(6.0)	(67.3)
E. TRANSFERS TO PROP. DISPOSAL (-)	(44.9)	0.0	(16.5)	(28.4)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(31.1)	0.0	(6.1)	(25.0)
G. OTHER (listed in Section 9)	0.8	0.0	(107.4)	108.2
H. TOTAL ADJUSTMENTS	83.5	0.0	98.6	(12.5)
6. INVENTORY EOP	1,271.0	35.6	1,260.5	(25.1)
7. INVENTORY EOP (REVALUED)	1,042.1	34.5	613.5	394.1
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.0
B. ECONOMIC RETENTION (memo)				36.5
C. CONTINGENCY RETENTION (memo)				367.9
D. POTENTIAL DOD REUTILIZATION (memo)				0.0
8. INVENTORY ON ORDER EOP (memo)	55.6	0.0	55.6	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	0.8	0.0	(107.4)	108.2
Strata Transfers	0.0	0.0	0.0	0.0
Net/Standard Difference	0.0	0.0	0.0	0.0
Total	0.8	0.0	(107.4)	108.2

INVENTORY STATUS
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
SUMMARY OF WHOLESALE AND RETAIL
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2018

	Total	Mobilization	---Peacetime--- Operating	Other
1. INVENTORY BOP	1,271.0	35.6	1,260.5	(25.1)
2. BOP INVENTORY ADJUSTMENTS	26.3	0.7	15.6	9.9
A. RECLASSIFICATION CHANGE (memo)	0.0	0.0	0.0	0.0
B. PRICE CHANGE AMOUNT (memo)	26.3	0.7	15.6	9.9
C. INVENTORY RECLASSIFIED AND REPRICED	1,513.3	36.2	1,477.2	(0.2)
3. RECEIPTS AT STANDARD	12.5	0.0	12.5	0.0
4. SALES AT STANDARD	164.3	0.0	151.6	12.8
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(2.4)	0.0	(2.4)	0.0
B. RETURNS FROM CUSTOMERS FOR CREDIT	3.0	0.0	3.0	0.0
C. RETURNS FROM CUSTOMERS, NO CREDIT	272.6	0.0	272.6	0.0
D. RETURNS TO SUPPLIERS (-)	(73.3)	0.0	(6.0)	(67.3)
E. TRANSFERS TO PROP. DISPOSAL (-)	(44.9)	0.0	(16.5)	(28.4)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(30.6)	0.0	(5.0)	(25.0)
G. OTHER (listed in Section 9)	(11.9)	0.0	(120.2)	108.5
6. INVENTORY EOP	1,218.3	36.3	1,222.1	(40.2)
7. INVENTORY EOP (REVALUED)	1,048.0	35.5	612.8	399.7
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.0
B. ECONOMIC RETENTION (memo)				34.2
C. CONTINGENCY RETENTION (memo)				345.4
D. POTENTIAL DOD REUTILIZATION (memo)				0.0
8. INVENTORY ON ORDER EOP (memo)	71.3	0.0	71.3	0.0
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(11.8)	0.0	(120.2)	108.5
Strata Transfers	0.0	0.0	0.0	0.0
Net/Standard Difference	0.0	0.0	0.0	0.0
Total	(11.8)	0.0	(120.2)	108.5

WAR RESERVE MATERIAL
DEPARTMENT OF THE NAVY
SUPPLY MANAGEMENT - MARINE CORPS
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2016

Stockpile Status			
	Total	WRM Protected	WRM Other
1. Inventory BOP @ std	33.4	33.4	0.0
2. Price Change	0.0	0.0	0.0
3. Reclassification	33.4	33.4	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	1.9	1.9	0.0
(1). Capitalizations	-0.1	-0.1	0.0
(2). Gains and losses	0.0	0.0	0.0
(3). Other	1.9	1.9	0.0
Inventory EOP	35.2	35.2	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 Reinve	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) 2018 BUDGET ESTIMATES
MAY 2017
(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	0.4	0.4	0.0
3. Reclassification	35.6	35.6	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	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	35.6	35.6	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 Reinve	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) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)
FY 2018

Stockpile Status			
	Total	WRM Protected	WRM Other
1. Inventory BOP @ std	35.6	35.6	0.0
2. Price Change	0.7	0.7	0.0
3. Reclassification	36.3	36.3	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	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	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	36.3	36.3	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

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13. 6% Depot Capital Investment

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DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN
DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2018 BUDGET ESTIMATES
MAY 2017
(DOLLARS IN MILLIONS)

	REVENUE (Maintenance, Repair, Overhaul) 3 year average			BUDGETED CAPITAL (Modernization, Efficiency)		
	<u>13-15</u>	<u>14-16</u>	<u>15-17</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
	6,419.7	6,754.1	7,098.4			
	6,754.1	7,098.4	7,406.1			
	7,098.4	7,406.1	8,004.9			
Revenue (Avg)	6,757.4	7,086.2	7,503.1			
Working Capital Fund						
Appropriations (if applicable)	20,272.3	21,258.6	22,509.3			
Total Revenue	20,272.3	21,258.6	22,509.3			
WCF Depot Maintenance Capital Investment						
Facilities/ Work Environment				65.5	66.4	78.9
Equipment				50.3	49.6	36.8
Equipment (Non-Capital Investment Program)				10.0	9.7	8.7
Processes				1.2	0.5	0.5
Total WCF Investment				127.0	126.2	124.9
Appropriated Funding						
MILCON				92.8	60.8	186.8
Procurement				41.0	63.1	218.7
Operation & Maintenance				357.8	247.5	219.2
Total Appropriated Funding				491.5	371.5	624.7
Component Total				618.5	497.7	749.5
Minimum 6% Investment				405.4	425.2	450.2
Investment Over/Under Requirement				213.1	72.5	299.4
Projected Investment				9.15%	7.02%	9.99%

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