

DEPARTMENT OF THE NAVY  
FISCAL YEAR (FY) 2024  
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES  
MARCH 2023

Navy Working Capital Fund (NWCF)

The estimated cost for this report for the Department of the Navy (DON) is \$191,986.

The estimated total cost for supporting the DON budget justification material is approximately \$3,031,705 for the 2023 fiscal year. This includes \$197,379 in supplies and \$2,834,326 in labor.

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## NAVY WORKING CAPITAL FUND

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The Navy Working Capital Fund (NWCF) is a revolving fund that finances the Department of the Navy (DON) activities which provide products and services on a reimbursable basis. Unlike for-profit commercial businesses, whose financial goal is to maximize profit, the NWCF activities' financial goal is to break even over the budget cycle. The NWCF provides stabilized pricing to customers and acts as a shock-absorber to fluctuations in market prices during the year of execution; fluctuations are recovered from customers in future years. The wide range of goods and services provided by NWCF activities are crucial to restoring readiness, improving lethality, and modernization.

Below are the NWCF business areas:

- Supply Management: Performs inventory oversight functions that result in the sale of aviation and shipboard components, ship's store stock, repairables, and consumables to a wide variety of customers.
- Depot Maintenance: Provides worldwide maintenance, engineering, and logistics support through mobilization, repair of aircraft, engines, components, and weapons systems, and the manufacture of parts and assemblies.
- Transportation: Provides over-ocean movement of supplies and provisions to deployed forces, and maintains prepositioned equipment and supplies.
- Research and Development: Supports weapons systems, facilities and equipment for the air, land, sea, and space operating environments through development, engineering, acquisition, in-service support, and repair and maintenance.

Consistent with the National Defense Strategy (NDS), the FY 2024 NWCF budget reflects the Department of the Navy's continued focus on balancing pressures like increasing cost of raw materials, programmatic adjustments, and cash solvency with readiness and customer demand to ensure the right blend of goods and services are provided at the required time while achieving the most efficient cost. Some of the noteworthy changes from FY 2023 to FY 2024 are listed below.

- Depots:
  - The Force Design 2030 strategy is to modernize the Marine Corps, thus resulting in reduced sustainment of various weapon systems that will be phased or disposed out of inventory. Marine Corps Depots is currently executing a modernization plan to improve depot operations within the United States Marine Corps industrial base. Marine Corps Depots workload decreases for the following weapon systems: Medium Tactical Vehicle Replacement (MTVR), Terminal Digital Radio, Troposcatter, and the Amphibious Assault Vehicle (AAV)
  - The Fleet Readiness Centers assess workload and manpower requirements through each budget cycle and identify opportunities to reduce End Strength and Work Years through workforce efficiencies, right sizing and workforce shaping. In FY

2024 there is a decrease for Direct Labor Hours in Components workload tied to reductions in forecasted inductions and workload mix changes.

- Transportation:
  - The Military Sealift Command (MSC) FY 2024 request includes updates to force structure to include shifting ship delivery schedules for the USNS ROBERT F KENNEDY (T-AO 208), USNS NAVAJO (T-ATS 8), USNS CHEROKEE NATION (T-ATS 7), USNS SAGINAW OJIBWE ANISHINABEK (T-ATS 8), USNS LENNI LENOPE (T-ATS 9), and POINT LOMA (EPF 15) along with changes to decommissioning schedules for USNS JOHN GLENN (ESD-1), USNS MONTFORD POINT (ESD-2), USNS CATAWBA (T-ATF 168) and USNS GRASP (T-ARS 51). Additionally, this request incorporates an increase for combat logistics force maintenance to buy down the backlog and reduce readiness risk.
- Supply:
  - The Navy Supply System Command is shifting focus to bring consumables or repair parts for the Maritime Supply Material Availability (SMA) to at least 85% availability levels for surface ships, carriers and submarines.
  - The Marine Corps Supply Management Activity Group Retail Centrally Managed (RCM) program is planning to be ended in FY 2024.
- Research and Development:
  - The Department of Navy increased Naval Innovative Science and Engineering funding from 2% to 3% of budgeted orders in FY 2024 to increase investment in science and technology, basic and applied research, workforce development, and lab revitalization across the laboratories pursuant to the authorities granted to the Department of Defense in Title 10 US Code 4123.

The FY 2024 NWCF maintains a workforce of 81,848 civilian and 1,228 military personnel. The value of goods and services provided by NWCF activities in FY 2024 is projected to be approximately \$34.9 billion, as shown in NWCF Financial Summary Table below.

**NWCF Financial Summary Table:**

<i>(Dollars in Millions)</i>	FY 2022	FY 2023	FY 2024
Revenue	\$ 32,286.0	\$ 34,292.3	\$ 34,931.4
Cost of Goods Sold	\$ 31,995.3	\$ 34,103.7	\$ 34,704.3
Net Operating Results (NOR)	\$ (604.3)	\$ (467.4)	\$ 536.2
Accumulated Operating Results (AOR)	\$ 31.1	\$ (244.2)	\$ 0.0
Civilian End Strength	83,624	83,859	83,389
Military End Strength	1,248	1,205	1,229
Civilian Workyears	81,269	82,280	81,796
Military Workyears	1,035	1,165	1,192
Capital Budget	\$ 262.1	\$ 267.3	\$ 303.5

**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.



**NWCF-Supply Management Unit Cost:**

The cost per unit sold includes Wholesale, Retail, and Operations obligations divided by Wholesale, Retail, and Operations net sales. Unit cost can change in the year of execution.

<b><u>Unit Cost</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
NWCF-SM Navy	0.97	0.96	0.99
NWCF-SM MC	0.70	0.87	0.97
<b><u>Composite Rates</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
NWCF-SM Navy Annual Price Change (APC)	8.29%	5.92%	5.32%
NWCF-SM Navy Composite Cost Recovery Rate	20.67%	20.81%	16.94%
NWCF-SM MC Annual Price Change (APC)	-10.40%	21.08%	-8.75%
NWCF-SM MC Composite Cost Recovery Rate	-5.08%	13.22%	4.01%

**Depot Maintenance**

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



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

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

### Transportation



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

Transportation is the responsibility of the Military Sealift Command (MSC) whose major clients include the Fleet Commanders for U.S. Pacific Fleet and U.S. Fleet Forces Command, and Naval Sea Systems Command. The programs budgeted by MSC through the NWCF are: 1) Combat Logistics Force which provides support utilizing civilian mariner manned non-combatant ships for material support including underway replenishment, commercial helicopter services and other direct fleet support to Navy ships worldwide; 2) Special Mission Ships which provide unique seagoing platforms, which support specialized scientific and technical missions for DoD sponsors; 3) Afloat Prepositioning Force Navy which deploys advance material for strategic lifts and at-sea staging around the world for the U.S. Navy and Marine Expeditionary Forces; and 4) Service Support which provides the Navy with towing, rescue and salvage, submarine support, floating medical facilities, as well as the Navy's 6th Fleet Flagship. Also included are Expeditionary Fast Transports (EPF), which provide rapid, intra-theater transport of conventional, or Special Forces and military equipment and supplies.

## **Research and Development**

Research and Development (R&D) includes the Warfare Centers and the Naval Research Laboratory. The R&D activities are intrinsically involved in the development, engineering, acquisition, and in-service support of weapons systems and equipment for the air, land, sea, and space operating environments. These efforts are key to the success of DON and DoD operations now and in the future. The R&D activities make



major contributions in battle-space awareness, net-centric operations (connectivity and interoperability), cyber warfighting capability, and command and control. Their contributions are evident through research, engineering, and testing efforts in the fields of space, aerial, surface, and sub-surface sensors, communications systems, multi-media data fusion, and battle management systems. The R&D activities are continuously innovating and implementing improvements focused on delivering additional and more lethal capability.

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

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

materials, techniques, equipment, systems and ocean, atmospheric, and space sciences and related technologies.

- Naval Facilities Engineering and Expeditionary Warfare Center (EXWC) operates Navy's research, development, test and evaluation for support combatant capabilities and sustainable facilities through specialized engineering, technology development, and lifecycle logistics services.

#### **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.

**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.

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 overall NWCF cash balance within an upper and lower operational range. The operational range is determined using a number of factors to include Working Capital Fund (WCF) activity rate of disbursements, range of operations, risk mitigation, and cash reserves to determine the acceptable upper and lower bounds for a healthy cash balances. The DON continues to implement process improvements and exert management controls to operate with efficiency. The various efforts that the DON has taken during the last couple of years have led to a healthy FY 2024 cash position which will execute within the operational bounds.

<b>Treasury Cash (Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Beginning Cash Balance</b>	<b>2,458.9</b>	<b>3,264.6</b>	<b>3,596.8</b>
Disbursements	31,910.6	33,334.2	34,926.0
Collections	32,566.3	33,666.5	34,572.4
Direct Appropriation	150.0	0.0	0.0
Transfers In/Out	0.0	0.0	0.0
<b>Ending Cash Balance</b>	<b>3,264.6</b>	<b>3,596.8</b>	<b>3,150.3</b>
<b>Upper Operational Range</b>	<b>3,475.0</b>	<b>3,722.0</b>	<b>3,899.0</b>
<b>Lower Operational Range</b>	<b>1,764.0</b>	<b>1,611.0</b>	<b>1,338.0</b>

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## 1. Depot Maintenance

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**Mission Statement/Overview:**

The Department of the Navy (DON) Depot Maintenance consist of two major Depot types: The Fleet Readiness Centers (FRCs) and the Marine Corps Depots.

FRCs produce quality airframes, engines, components and support equipment, and provide services that meet Naval Aviation Enterprise (NAE) goals. The FRCs provide responsive worldwide maintenance, engineering, and logistics to directly support the mission of the U.S. Navy and maintain 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. The work completed at the FRCs ensure deployed and next-to-deploy units have the battle-ready items they need to train, fight, and win today while supporting the force to win tomorrow.

**Activity Group Composition:**

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

The Marine Corps Depots provides innovative, worldwide, depot level and related maintenance, rebuild, modification, and repairs, on Department of the Navy (DoN), federal and non-federal customers' warfighting weapon systems. Marine Corps Depots provide 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. Marine Corps Depots provide quality products and responsive maintenance support services that maintain a core industrial base in support of Department of Defense (DoD) operating forces mobilization and requirements. Marine Corps Depots enables equipment readiness and operational availability by refurbishing equipment before returning it to the warfighter.

**Activity Group Composition:**

Activities	Location
Maintenance Command Production Plant Albany (PPA)	Albany, GA
Maintenance Command Production Plant Barstow (PPB)	Barstow, CA

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**Significant Changes since the FY 2023 President's Budget:**

Significant changes impacting FRC operations, Net Operating Results (NOR), New Orders, Revenue, Costs, End Strength and Work Year projections include:

In FY 2022, the FRCs migrated their financial system from Defense Information Financial Management System (DIFMS) to Navy Enterprise Resource Planning (ERP). The transition began on 1 October 2021 and the FRCs went Full Operational Tempo on 20 December 2021. About \$17 M in cleanup efforts for Revenue and Collections were not completed in FY 2022. The remaining cleanup efforts are reflected in the FY 2023 budget by using cash and is rate neutral.

The FRCs assess workload and manpower requirements through each budget cycle and identify opportunities to reduce End Strength and Work Years through workforce efficiencies, right sizing and workforce shaping. Increasing the utilization of our direct workforce and right sizing indirect will help drive down the total cost of the workforce without adversely affecting customer demand levels.

- Decreased End Strength and Work Years in FY 2022, FY 2023 and FY 2024.
- Decreased Direct Labor Hours in Components workload in FY 2024 tied to reduction in forecasted inductions and workload mix changes.

The DON deferred \$15.3 million in cash surcharges executed during FY 2022 in an effort to mitigate NWCF cash balances. Additionally, the DON deferred \$58.0 million in FY 2022 losses based on NWCF cash balances and rate stability for NWCF customers. The total Accumulated Operating Results (AOR) deferral ensures that the combined effects of FY 2022 execution have a neutral impact on FY 2024 rates.

The FY 2023 costs included increased material prices for F414 engine parts which created a significant FY 2023 Operation and Maintenance, Navy (OMN) shortfall. To mitigate this shortfall, the DON will absorb a projected \$228.2 million in losses related to F414 engine parts by using excess Navy Working Capital Fund (NWCF) cash balances. FRCs will defer \$228.2 million of NOR losses projected in FY 2023 to ensure the stability of FRC rates and preserve fleet buying power in FY 2024 and beyond.

Marine Corps Depots budget has been adjusted by the Commandant of the Marine Corps' Force Design 2030 strategies along with other customers reduced budgets in FY 2023/ FY 2024. The Force Design 2030 strategy is to modernize the Marine Corps, thus resulting in reduced sustainment of various weapon systems that will phased or disposed out of inventory. Marine

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Corps Depots is currently executing a modernization plan to improve depot operations within the United States Marine Corps industrial base.

FY 2023 Marine Corps Depots workload decrease for the following weapon systems: Medium Tactical Vehicle Replacement (MTVR) -\$7.2 million; Maintenance Shelter -\$5.3 million; and Semi-Trailer Refueler -\$5.1 million. FY 2024 Marine Corps Depots workload decrease for the following weapon systems: Terminal Digital Radio, Troposcatter -\$11.1 million; Amphibious Assault Vehicle (AAV) -\$10.2 million; Third Echelon Test Systems -\$3 million; and Semi-Trailer Refueler -\$6.4 million.

The FY 2024 Depot Maintenance request includes an increase of \$32.3 million for the change in Civilian Pay Raise assumptions (2.1% to 5.2%).

The NWCF performed an enterprise wide review on the cost of doing business with the intent of aligning resources as efficiently as possible. As a result, DON generated \$3.0 million in FY 2024 cost that could be readily diverted to other higher priority and mission essential programs. The FRCs and MC Depots recognized the following reform initiative: Decreased \$1.7 million and \$1.3 million respectively, in Federal Employee Compensation Act (FECA) related costs.

**Depot Maintenance (FRC and Marine Corps) Financial Profile:**

<b><u>Orders/Revenue/Expense/Operating Results (\$Millions):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Orders	\$3,242.6	\$3,259.6	\$3,345.1
Revenue	\$3,041.6	\$3,177.2	\$3,158.2
Expense	<u>\$3,106.8</u>	<u>\$3,336.5</u>	<u>\$3,176.2</u>
Operating Results	(\$65.2)	(\$159.3)	(\$18.0)
Capital Surcharge	\$0.0	\$0.0	\$0.0
Budgetary Transfers	\$0.9	\$0.0	\$0.0
Asset Adjustment	<u>(\$59.9)</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	(\$124.2)	(\$159.3)	(\$18.0)
Prior Year AOR	(\$130.4)	(\$269.9)	(\$40.0)
Other Changes Affecting AOR	\$0.00	\$15.3	\$(373.9)
Deferred AOR	<u>\$(15.3)</u>	<u>\$373.9</u>	<u>\$431.9</u>
Accumulated Operating Results (AOR)	(\$269.9)	(\$40.0)	\$0.0

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**Orders, Revenue, and Expense:**

In order to achieve the goal of zero AOR in FY 2024, estimates have been updated from the FY 2023 President’s Budget to reflect all known pricing and workload assumptions.

Orders – FRCs new Reimbursable Orders are consistent with FY 2022, FY 2023, and FY 2024 Revenue and Expense projections. Marine Corps Depots budgeted workload from non-organic sources was based upon Letter of Intent (LOIs) from customers and historical execution. Marine Corps Depots orders are decreasing in FY 2023 and FY 2024 primarily due to reduction of workload relating to the Force Design 2030 strategies.

Revenue – FRCs revenue for FY 2022, FY 2023, and FY 2024 is consistent with updated estimates of new Reimbursable Orders and Direct Labor Hour (DLH) projections. Revenue is tied to ERP cleanup efforts. Marine Corps Depots revenue fluctuates across the budget years due to the reduction in customer requirements as mentioned above in orders.

Expense (Cost of Goods & Services) – FRC’s FY 2023 costs are projected to grow due to planned F414 engine material cost increase. FY 2024 costs are projected to decrease tied to reduction in forecasted inductions and workload mix changes. Marine Corps Depots expenses in FY 2022 are significantly high due to the \$55.1 million inventory write off and an increased cost due to ERP implementation. Marine Corps Depots expenses declined in FY 2023 and FY 2024 primarily driven by the reduction of Direct Labor and Material, as a result of decreases in workload.

Net Operating Results – Note the Marine Corps Depots inventory write-off is included as deferred adjustment to AOR. The FY 2024 NOR projection is \$0 and FY 2024 rates are set to achieve zero AOR.

<b><u>Disbursements/Collections/Outlays (\$Millions):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Disbursements	\$3,050.9	\$3,335.8	\$3,163.3
Collections	\$2,935.4	\$3,200.6	\$3,175.5
Net Outlays	\$115.5	\$135.2	-\$12.2

Current Net Outlay projections reflect workload changes, updated operating estimates, and are based upon Revenue, Cost, and Capital Investment Program (CIP) outlay estimates.

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**Workload:**

<b><u>Direct Labor Hours (000):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Current Estimate	12,699	13,592	13,321

**Direct Labor Hours (DLHs):**

FRC rates are based on DLHs required for stabilized workload. DLHs decrease in FY 2023 to account for reduction in Airframes, Modifications, and Component workload. DLHs decrease in FY 2024 is tied to reduction in forecasted inductions on Airframes and Components and workload mix changes. Marine Corps Depots for all fiscal years are based off a decrease in workload and workload mix.

**Performance Indicators:**

The primary performance indicator is unit cost, which represents the average cost of delivering goods and services to our customers. Unit Cost is the method established to authorize and control costs. Unit cost goals allow depots 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.

**FRCs:**

<b><u>Unit Cost:</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Total Stabilized Cost (\$Millions)	\$2,863.9	\$3,060.9	\$2,909.8
Workload (DLHs) (000)	11,321	12,427	12,263
Unit cost (per DLH)	\$252.97	\$246.31	\$237.28

<b><u>Stabilized / Composite Rates:</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Stabilized Rate	\$210.63	\$222.64	\$234.26
Change from Prior Year		\$12.01	\$11.62
Composite Rate Change		5.70%	5.22%

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**Summary of Workload Indicators:**

	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
AIRFRAMES	362	335	326
O&M,N	327	299	293
O&M,NR	14	15	18
RDT&E	3	7	3
Other	18	14	12
ENGINES	1,870	2,296	2,046
O&M,N	1,787	2,201	1,957
O&M,NR	30	50	50
RDT&E	5	5	5
Other	48	40	34
COMPONENTS			
Working Capital Fund (NSF(7R))	17,236	20,240	18,572

**Marine Corps Depots:**

**Unit Cost:**

	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Total Stabilized Cost (\$Millions)	\$242.9	\$275.6	\$266.4
Workload (DLHs) (000)	1,378	1,165	1,057
Unit cost (per DLH)	\$176.25	\$236.61	\$251.91

**Stabilized / Composite Rates:**

	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Stabilized Rate	\$181.94	\$204.01	\$212.62
Change from Prior Year		\$22.07	\$8.61
Composite Rate Change		13.81%	4.21%

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Rates are based on DLHs required for anticipated workload. Customers are charged a predetermined rate per direct employee hour worked. The rate consists of direct and indirect labor and applied overhead. Unique direct non-labor costs are billed on a reimbursable basis to the customer.

**Staffing:**

<b><u>Civilian/Military ES &amp; Work Years:</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Civilian End Strength	11,969	11,886	11,850
Civilian Workyears (Strength time)	11,758	11,759	11,640
Military End Strength	117	128	126
Military Workyears	81	128	126

**Civilian Personnel:**

Depot civilian personnel budget reflects workforce levels necessary to accommodate planned workload without excessive use of overtime hours. It is consistent with the workforce shaping required to account for the projected workload mix of full-time and part-time personnel required for optimal fleet support.

**Military Personnel:**

The military end-strength is expected to remain consistent throughout the budget and the future, with the exception to FRC in FY 2023 to FY 2024 due to efforts to realign sailor integration into depot level maintenance for enhanced skill level exposure and training.

<b><u>Capital Investment Program (CIP) Authority (\$Millions):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Equipment, Non-ADP / Telecom	\$42.2	\$35.3	\$50.9
Equipment, ADPE / Telecom	\$5.9	\$3.0	\$0.7
Software Development	\$0.0	\$0.0	\$0.0
Minor Construction	<u>\$1.2</u>	<u>\$16.6</u>	<u>\$6.4</u>
Total	\$49.3	\$54.9	\$58.0

The CIP assists the depots in achieving their mission by reinvesting in plant equipment and facilities.

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**Carryover Compliance (millions):**

<i>Fund 11a. Carry Over Reconciliation (\$ in Millions)</i>			
<b>Carry Over Calculation Categories</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
1. Total New Orders	3,242.6	3,259.6	3,345.1
2. Net Carry-in Orders	1,684.8	1,894.9	1,977.3
<b>3. Total Gross Orders (Lines 1 + 2)</b>	<b>4,927.4</b>	<b>5,154.5</b>	<b>5,322.4</b>
4. Revenue	3,032.5	3,177.2	3,158.2
<b>5. Carryout (Line 3 - Line 4)</b>	<b>1,894.9</b>	<b>1,977.3</b>	<b>2,164.1</b>
6. Workload Completed per Month <b>(Line 4 ÷ 12)</b>	<b>252.7</b>	<b>264.8</b>	<b>263.2</b>
<b>7. Months of Carryover (Line 5 ÷ Line 6)</b>	<b>7.5</b>	<b>7.5</b>	<b>8.2</b>

The amount of projected Carryover for these fiscal years reflect additional months of carryover over the optimal six-month level to continue mission essential performance and fulfill mission requirements.

The FRC carryover increase is primarily driven by additional inductions and orders (\$26 M F414 engine, \$6 M FA-18 Hornet, \$2 M F402 engine) above budget estimates for FY 2022-2024. In addition the receipt of \$30.1 M in Ukraine Supplemental Funding for F414 Engine repairs. Prioritization of current year ERP cleanup and documents that had Revenue/Cash impacts over prior year document cleanup of NAVSUP WSS workload. Once complete, the carryover dollars associated with those documents will be reduced which will be reflected in PB-25.

MC Depots carryover increase is driven to billing issues within N-ERP. MC Depots assumes that once the billing and issues related to direct cost on customer funded lines are corrected, the actual carryover totals will be within the allowable carryover limits.

## DON 6% Depot Capital Investment

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**DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN  
DEPARTMENT OF THE NAVY  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	<u>REVENUE</u> (Maintenance, Repair, Overhaul) 3 year average			<u>BUDGETED CAPITAL</u> (Modernization, Efficiency)		
	<u>FY 19-21</u>	<u>FY 20-22</u>	<u>FY 21-23</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
	9,222.1	9,584.6	9,320.2			
	9,584.6	9,320.2	9,948.6			
	9,320.2	9,948.6	10,361.4			
<b>Revenue (Avg)</b>	9,375.6	9,617.8	9,876.7			
Working Capital Fund	3,135.9	3,150.3	3,140.8			
Appropriations (if applicable)	6,239.8	6,467.5	6,735.9			
Total Revenue	9,375.6	9,617.8	9,876.7			
<b>WCF Depot Maintenance Capital Investment</b>						
Facilities/ Work Environment				81.3	76.8	75.4
Equipment				48.3	38.3	51.6
Equipment (Non-Capital Investment Program)				13.9	16.1	13.1
Processes				5.7	9.3	7.7
Total WCF Investment				149.2	140.4	147.9
<b>Appropriated Funding</b>						
MILCON				293.3	1,196.4	1,437.0
Procurement				456.8	184.1	231.5
Operation & Maintenance				465.0	438.8	462.5
Total Appropriated Funding				1,215.0	1,819.4	2,130.9
<b>Component Total</b>				1,364.2	1,959.8	2,278.8
Minimum 6% Investment				562.5	577.1	592.6
Investment Over/Under Requirement				801.7	1,382.7	1,686.2
<b>Projected Investment</b>				<b>14.6%</b>	<b>20.4%</b>	<b>23.1%</b>

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## Fleet Readiness Centers - Exhibits

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**CHANGES IN THE COSTS OF OPERATIONS  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - FLEET READINESS CENTERS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2022 Actuals	<b>2,790.092</b>
FY 2023 President's Budget:	<b>3,046.377</b>
Estimated Impact in FY 2023 of Actual FY 2022 Experience:	<b>0.000</b>
Pricing Adjustments:	<b>52.616</b>
Personnel Pricing	0.022
Civilian Personnel	0.011
Military Personnel	0.011
General Materials, Supplies & Equipment	52.594
Program Changes:	<b>-31.914</b>
Airframes work (F/A-18 & T-6)	-18.159
Engines work (F414)	64.594
Components work (NSF)	-18.978
Other Support work	45.401
Modification work (F/A-18)	-43.681
Product Support work (Engineering & Logistics)	-61.091
Other Changes:	<b>-6.144</b>
Depreciation	-7.332
Fuel	-0.001
(Issue #72153) Fuel Pricing	1.189
FY 2023 Current Estimate:	<b>3,060.935</b>
Pricing Adjustments:	<b>53.710</b>
Annualization of Prior Year Pay Raises	<b>22.591</b>
Civilian Personnel	22.453
Military Personnel	0.138
Civilian Pay Raise	18.338
Military Pay Raise	0.234
Fuel	-0.199
General Materials, Supplies & Equipment	3.414
General Costs and Services (Equipment Maintenance/Facility sustainment, Restoration, and Modernization)	2.332
Other Purchased Services	7.000
Productivity Initiatives and Other Efficiencies:	0.000
Program Changes:	<b>-212.313</b>
Airframes work (H-60, F/A-18, & T-6)	-58.835
Engines work (F414)	-9.192
Components work (NSF)	-86.363
Other Support work	-27.727
Modification work (F/A-18)	17.795
Product Support work (Engineering & Logistics)	-47.992
Other Changes:	<b>7.476</b>
Depreciation	7.476
FY 2024 Estimate:	<b>2,909.808</b>

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**DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN**  
**DEPARTMENT OF THE NAVY**  
**DEPOT MAINTENANCE - FLEET READINESS CENTERS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

	<u>REVENUE</u> (Maintenance, Repair, Overhaul) <u>3 year average</u>			<u>BUDGETED CAPITAL</u> (Modernization, Efficiency)		
	<u>FY 20-22</u>	<u>FY 21-23</u>	<u>FY 22-24</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
<b>Revenue (Avg)</b>	2,801.3	2,858.5	2,878.1			
Working Capital Fund (Avg)	2,801.3	2,858.5	2,878.1			
Appropriations (Avg)	0.0	0.0	0.0			
Total Revenue (Avg)	2,801.3	2,858.5	2,878.1			
<b>WCF Depot Maintenance Capital Investment</b>						
Facilities/ Work Environment				77.8	69.8	70.3
Equipment				41.6	29.8	44.6
Equipment (Non-Capital Investment Program)				13.9	14.7	12.1
Processes				5.7	6.3	7.7
Total WCF Investment				139.0	120.5	134.7
<b>Appropriated Funding - List by Appropriation</b>						
MILCON				0.0	124.6	0.0
Procurement				41.1	65.4	93.6
Operation & Maintenance				0.0	0.0	0.0
Total Appropriated Funding				41.1	190.0	93.6
<b>Component Total</b>				180.1	310.6	228.3
Minimum 6% Investment				168.1	171.5	172.7
<b>Investment Over/Under Requirement</b>				12.0	139.1	55.6
				6.4%	10.9%	7.9%

**CAPITAL INVESTMENT SUMMARY**  
**DEPARTMENT OF THE NAVY**  
**DEPOT MAINTENANCE - FLEET READINESS CENTERS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

Line #	Description	FY 2022		FY 2023		FY 2024	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	<b>Non-ADPE and Telecom Equipment &gt;= \$.250M</b>	12	\$35.695	14	\$26.819	17	\$43.929
	- Quality Control/Testing	5	\$10.022	1	\$1.500	1	\$15.936
	- Machinery	3	\$7.756	3	\$6.637	4	\$5.271
	- Support Equipment	4	\$17.917	10	\$18.682	12	\$22.722
2	<b>ADPE and Telecom Equipment &gt;= \$.250M</b>	3	\$5.906	1	\$3.000	1	\$0.720
	- Computer Hardware (Production)	2	\$2.306	1	\$3.000	0	\$0.000
	- Computer Hardware (Network)	1	\$3.600	0	\$0.000	1	\$0.720
3	<b>Software Development &gt;= \$.250M</b>	0	\$0.000	0	\$0.000	0	\$0.000
4	<b>Minor Construction (&gt;= \$.250M and &lt;= \$6.000M)</b>	2	\$1.178	3	\$14.724	2	\$4.855
	- New Construction	2	\$1.178	3	\$14.724	2	\$4.855
	<b>Grand Total</b>	17	\$42.779	18	\$44.543	20	\$49.504
	<b>Total Capital Outlays</b>		\$24.585		\$38.645		\$39.356
	<b>Total Capital Investment Recovery</b>		\$30.144		\$41.937		\$49.412

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Select Business Area	#001 - Non-ADPE						Fleet Readiness Centers		
Non-ADP Equipment	FY 2022			FY 2023			FY 2024		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Vehicles	0	-	\$0	0	-	\$0	0	-	\$0
Material Handling	0	-	\$0	0	-	\$0	0	-	\$0
Installation Security	0	-	\$0	0	-	\$0	0	-	\$0
Quality Control/ Testing	5	2,004	\$10,022	1	1,500	\$1,500	1	15,936	\$15,936
Medical Equipment	0	-	\$0	0	-	\$0	0	-	\$0
Machinery	3	2,585	\$7,756	3	2,212	\$6,637	4	1,318	\$5,271
Support Equipment	4	4,479	\$17,917	10	1,868	\$18,682	12	1,894	\$22,722
<b>Total</b>	<b>12</b>	<b>2,975</b>	<b>\$35,695</b>	<b>14</b>	<b>1,916</b>	<b>\$26,819</b>	<b>17</b>	<b>2,584</b>	<b>\$43,929</b>
<b>Justification:</b>									
<p>As the Department of the Navy's provider of depot level maintenance, repair, overhaul, &amp; 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.</p> <p>The acquisition of capital assets efficiently and effectively accomplishes the objective for which it is justified which are improved efficiency or effectiveness of operations; replacement of potentially unsafe, beyond economical repair, or inoperative and unusable assets; and environmental, hazardous waste reduction, or regulatory agency (state, local, or Federal) mandated requirements. Alternatives were considered for each project, but procurement is the most cost effective for the government.</p> <p><b>Examples of Quality Control/Testing purchases include:</b></p> <p><b>H-53 Nose Gearbox (NGB) Test Stand</b>  The purpose of this procurement is to upgrade the Nose Gearbox (NGB) Test Stand. This upgrade will include an all new data acquisition and control system, data monitoring system, camera system, vibration analysis system, window guarding and a new torque. Modern components and a new operating system will improve performance and reliability, and require less maintenance. Window guarding will add an extra layer of operator protection.</p> <p><b>Auxiliary Power Unit (APU) Test Cell (5)</b>  The purpose of this procurement is to upgrade the Gas Turbine Compressor (GTC) Test Cells (5). This upgrade will include all new data acquisition and control system, fuel flow meters, bleed air control valves, and water valve positioners. New equipment will improve performance and reliability. Better accuracy and controls will improve efficiency.</p>									

**Air Turbine Starter (ATS) Test Stand #2**

The purpose of this procurement is to replace the Air Turbine Starter (ATS) Test Stand. This project will include all new data acquisition and control system, gearbox, torque sensors, electric motors, motor drives, air valves, oil pumps, flow meters, pressure transducers, and stainless steel piping. New equipment will improve reliability, and require less maintenance and engineering support.

**B770 Real-Time X-Ray System**

The purpose of this project is to install a Real-Time X-Ray system to improve the unshielded FA-18 high flight hour inspections. The current process requires seven barrier monitors and five artisans to manually align the shots, necessitating multiple shots before the desired results are achieved. This project will minimize the number of man-hours needed to conduct x-ray shots by replacing the manual task of aligning the tube-head with an automated system capable of delivering a real-time feed in addition to the added capability of digital radiography. This allows artisans to view the image in real time before the shot is taken, subsequently reducing image processing time as an instant digital image is produced. This project will reduce current man-hours from 3,712 to 896 per x-rayed aircraft, and required personnel from 12 to eight. Although alternatives have been considered, the current process is inefficient, and this proposed process will eliminate waste in several areas.

**LFTA Test Bench**

The purpose of this project is to purchase a Lateral & Longitudinal Feel Trim Actuator (LFTA) test bench. The existing test bench uses an outdated, broken, and difficult to replace XY plotter; has parts that wear out and are no longer manufactured; and only tests FA-18 A-D LFTAs. The new stand will take up less space, use modern testing equipment using LabVIEW, & test FA-18 E-G components.

**Universal Fuel Control Test Stand**

The purpose of this procurement is to replace (3) of the Universal Fuel Control Test Stands. This replacement will include all new data acquisition and control system, polycold system, and several new mechanical components. Existing utilities (electrical, air, water) will be replaced. New equipment with more modern components will improve performance and reliability.

**Test Cell**

The purpose of this procurement is to procure a T408 engine Test Cell to support workload related to the CH53K Helicopter. This requirement is due to the capability timeline associated with Depot Level engine support. This test cell is critical Path to depot level repair and is on the critical timeline to standup and depot capability for the PMA.

**Motor-Driven Fan Test System**

The purpose of this project is to purchase a Motor-Driven Fan Test System (MDFTS). The shop currently uses an old, in-house-fabricated test system that does not produce printed results and does not have a breaker to protect the equipment. The new MDFTS produced by Boeing would solve these issues, make a safer testing environment, and produce printed results, increase throughput, and decrease turnaround time. The new system would measure & record digitally, provide a printable report, and will physically separate the operator from the moving parts of the test system.

**ARRHB Pull Tester, Bldg. 101D**

The purpose of this project is to procure and install a new Automatic Repeatable Release Holdback Bar (ARRHB) pull tester that will support the F/A-18 A-G (Legacy and Superhornet), T-45, and F-35. Bottleneck in capacity due to only one available machine that can run all platforms. Workload has started to increase by 48%.

**Examples of Machinery purchases include:**

**Motch Grinder**

The purpose of this project is to replace the existing Motch grinders. The Engine Machine shop maintains the only organic Motch precision grinding machine center dedicated to precision grinding and measuring of engine parts to precise operational diameters. Present machines are high use, high maintenance and are worn out with extreme reliability issues due to age and complexity. The new grinders will include more robust measuring systems and modern CNC controls, electronics, software, and in-process gauging. High-pressure coolant for cleaning grinding wheel and de-burring will also be included.

**CNC Horizontal Grinder**

The purpose of this project is to replace an existing Kellengberger horizontal grinding machine that was installed in 2009. The existing machine performs special grinding operations on all engine programs. Due to its age, the electronics, controller, and motors can no longer be supported, which is expected to lead to greater down time in the future due to part obsolescence, procurement difficulties, and limited availability of suppliers. Replacing this machine will provide capability for this work for the next 10-15 years.

**Jig Grinder Cell (2)**

The purpose of this project is to replace the Mitsui Seiki and Campbell Jig Grinder with new Jig Grinders. This procurement is expected to utilize existing utilities and will require minor facilities modifications depending on the type of equipment that is chosen. Multiple shop will benefit throughout the FRC by these Jig Grinders.

**Vacuum Furnace A & B (2)**

The purpose of this project is to replace four Vacuum Furnace. The Vacuum Furnaces were purchased more than 30 years ago. The daily usage has created numerous vacuum/air leaks, which are hard to diagnose and seal. The daily usage of the furnace heating and cooling cycles coupled with the repairs have led to wear on the sealing surfaces. The wear on the sealing surfaces creates air and vacuum leaks and additional strain on the pumps. The leaks have led to a subpar vacuum level and continue to cause oxidation issues on material components. The impacts of the oxidation has caused the shop to reheat treat several components a second time to remove or reduce the oxidization effect.

**Plasma Spray Booths**

The purpose of this project is to UPGRADE 2 Plasma Booths. Both booths need new powder feeder, new control unit, possible replacement of heat exchanger, new Distribution unit, new floor valves, meters, and new guns. Also needs nozzles and chucks. Replace hardware inside. Booth 2 has a robot that may need replacement (Booth 1 is fed manually).

**CNC Lathe**

The purpose of this project is to replace the Prot-Trak CNC Lathe. The procurement is expected to utilize existing utilities and will require minor facilities modifications depending on the type of equipment that is chosen. This lathe is used for all platforms here and abroad. It makes tooling for kits on all platforms and makes repair parts for maintenance jobs.

**B797 Grinders (Motch & TR-2) (2)**

The purpose of this project is to replace (2) grinders aged 34/14 year old with (2) similar grinders. The Engine Machine shop utilizes the Motch precision grinding machine center for grinding and measuring engine components to precise operational diameters. The machines must have contouring grinding capabilities to produce the required aircraft engine parts. Replacing this machine will ensure that FRCSE has the ability to produce quality parts for the next 10-15 years. The new machine will also reduce maintenance downtime, which is currently exceeding 800hrs/yr.

**Mill Turn Machines (2)**

The purpose of this project is to replace the existing Mill Turn Machines that are beyond expected their useful life with 2 new machines to increase efficiency, accuracy and productivity, along with cost savings, and safety. They produce the bushings that the component shop then cuts down to size. The 5-axis trunnion table allows full range of motion to access hard or impossible to reach sections of the part not normally accessible by 3 axis machining. The machines will increase capability of parts we can do in the future and enable the FRC to complete jobs in less time or at least much more competitively

**Vertical Turret Lathe**

The purpose of this project is to procurement of a new Vertical Turret Lathe (VTL) and tooling, in order to bring manufacturing capabilities for LM2500 components back in-house. To increase the workload and decrease the single point of failure. The new vertical turret lathe (VTL) will support the LM2500 program. It will also be used as a backup for the existing lathe that supports the E2/C2 and FA-18 ADL/component workloads Delivery timetables will increase by 25%. The new VTL will have the ability to increase workload by another 25%. The VTL is a highly rigid platform configured to machine a part with its Axis Vertical, which eliminates the need for a steady rest or tailstock, enhancing accuracy and repeatability.

**400 CNC Multi-Axis Tool Grinder**

The purpose of this project is to procure a CNC Multi-Axis Tool Grinder. This tool grinder will eliminate all tool outsourcing requirements for manufacturing cutters. This tool grinder will also be able to fabricate some tools reducing tool purchases for manufacturing. Tools are used in every facet of manufacturing. Tool shortages can shut down entire lines of production. FRC combats this by ordering backups and sending used ones out for refinishing. This adds cost and time to the already length production process. Having a tool grinder in house means that turnaround time for tools can be almost instant relative to current methods.

**Examples of Support Equipment purchases include:****Modify/Upgrade X-Ray Equipment**

The purpose of this procurement is to Modify/Upgrade X-Ray equipment and vault to accommodate future incoming H-53K rotor blade workload. The engine air particle separator {EAPS} manipulator will be moved from the vault to outside of the vault. A new vault will be required with the EAPS manipulator. The FRC needs to upgrade the equipment and move the EAPS manipulator to accommodate the equipment to avoid a single point of failure. The EAPS needs to be in its own vault so both vaults can operate independently.

**3D Circuit Printer**

The purpose of this project is to procure a 3D Circuit Board Printer. The procurement will significantly reduce the time required to prototype Printed Circuit Boards (PCBs) from engineering design to test article. Current process takes 6 weeks on average to create a prototype PCB. This Additive Manufacturing printer will reduce the turnaround time from 6 weeks to 2 days, a better than 90% improvement.

**Vapor Degreaser**

The purpose of this project is to remove a non-functioning Vapor Degreaser and replace it with a new vapor degreaser. The current vapor degreaser will be over 18 years old when replaced. The FRC has established capability of degreasing a plethora of components, which is crucial in processing components for many platforms. Projected workload will only increase the demand for the degreaser. The procurement will improve hazardous waste control reducing risk to the artisans and environment.

**Tube Benders**

The purpose of this project is to procure (2) Tube Benders for Bldg. This project will significantly improve availability of machines. Additionally, repeatability and efficiency of manufacturing tube assemblies will improve due to accuracy and ease of setup of the new machines. If not procured, continued extended downtime and excessive scrap tube waste will continue. Current recorded downtime is 19,151 hrs.

**Refurbish Cyril Bath Stretch Press**

The purpose of this project is to refurbish a Cyril Bath Stretch Press machine. This project will improve the capabilities of the machine. Additionally, repeatability and efficiency of manufacturing parts will improve due to accuracy and ease of setup of the new machine. If not procured, continued extended downtime and excessive waste will continue.

**Replace Air Scrubber System**

The purpose of this project is to replace an existing air scrubber to minimize production downtime within the plating shop of building 472, which primarily supports FA-18 and E-2/C-2 landing gear. The toxic plating line chemicals, such as hexavalent chrome, make this a monumental safety and environmental issue when the equipment is down; this triggers a production-halt of the entire plating line. A new system will also be more efficient and compliant to consistently more-restrictive CA-State environmental requirements, whereas current equipment is “grandfathered” due to the timeframe of when original Air Quality Permits were issued.

**Replace AVTRON Generator Test Stand**

The purpose of this project is to replace the existing AVTRON Generator Test Stand for the repair and testing of the oil-cooled generators in support of the FA-18, AV-8B Harrier and the V-22 Osprey aircraft platforms. The existing test stand is operating well beyond its normal life expectancy range at 27 years. With future workload for the above-mentioned platforms, the situation poses a single point failure for the return-to-service testing of a broad range of aircraft generators. A new reliable Generator Test Stand is required to reduce test times, increase throughput, and eliminate frequent breakdowns of the existing Test Stand. If this test stand is not replaced, frequent breakdowns will continue to cause further backlog of work as well as second shift and overtime expenditures to catch up with demand workloads. Other benefits to the FRC with a new test bench include connection to the FRC RDT&E Network for real-time progress monitoring, future expansion to support a wide range of future aircraft generators with adapter kits and software, and incorporation of AC motor/drive technology for improved system performance and lower long-term maintenance cost.

**LM2500 Thrust Stand Overhaul**

The purpose of this project is to overhaul Test Cell for the LM2500 Thrust Stand, used to test & certify that dual-shaft turbine engines are within program specifications before sale to the Surface Fleet Forces (SURFOR) Navy. The existing overhead thrust stand is over 35 years old and repair parts are extremely hard to find, which causes repair delays lasting weeks to months. The system is antiquated and is in desperate need of replacement, and a single point of failure for testing dual shaft turbines jeopardizes the readiness of the surface fleet. Additionally, later models of the LM2500 engine do not easily fit into the existing mounting brackets without modification which increases preparation time when an engine is mounted & unmounted, and presents a future safety hazard if one of the newer/larger engines comes loose while under full load testing.

**Test Line Power Upgrades, Bldg. 785**

The purpose of this project is to replace Test Line Power. (1) Unitron frequency power converter at the Aircraft Test Line facility, replace all degraded underground power cables from converters to individual turn-up pads, and install/build parapet type walls to divert surface water from manholes where it currently collects and pools. Additionally, plans include replacement of (3) shelters housing all three-frequency power converters in this system for better weather protection of all equipment. There are (15) individual aircraft turn-up pads currently supporting a workload of approximately (70) FA-18 and E-2C aircraft annually; anticipated future workload is expected to expand further in support of E-2D, V-22, and JSF programs. When power converters are in a hard-down situation, portable/trailer generators are temporarily deployed but availability of these units is a limiting factor leading to backlog of planes unable to be tested before passing along to pilots for actual in-flight testing.

**Universal Fuel and Control Test Stand (UF-2, 3, 9)**

The purpose of this project is to remove and replace existing UF-2 Fuel Accessory & Control Test Stand, UF-3 Universal Fuel Test Stand and UF-9 Fuel Component Test Stand by combining (3) units into a single bench, and purchasing (2) units to eliminate a single point of failure. These benches collectively support E-2/C-2, FA-18, and Vertical Lift platforms and will increase reliability and modernize the existing equipment that is 47 years old on average. All (3) benches have been deemed critical pieces of machinery for replacement by FRC leadership, despite limited production data due to long-term “down” periods. UF-2 is key to revitalizing and supporting the existing and future of the LM2500 program at the FRC; UF-3’s expansive “down time” spanned 2012-2016 due to obsolescence and difficulty in obtaining suitable repair parts; UF-9 is designed for testing Fuel Float Valves used in E-2/C-2 Wing Fuel Tanks and the FRC is the only source of repair in the Navy. The (3) test stands produce, on average, four E-2/C-2 units per work year. These units are processed, repaired, and returned to service. Upgrading these (3), Tier-2 Critical benches by combining into a new one, built with solid-state parts and components will increase reliability and production capacity.

**Intermittent Fault Detection and Isolation System (IFDS)**

The purpose of this project is to procure a new Intermittent Fault Detection and Isolation System (IFDS) machine to test simultaneous vibration and temperatures on radar components, and other high cost degraders, specifically the GCU in the FA-18. This machine finds potential component failures that otherwise could only be found during aircraft flight, putting pilots and aircraft at risk. At present, there is a delay of 30 to 90 days to test one unit alone, and unacceptable levels of re-work on the units due to lack of proper testing equipment. This procurement will reduce timetables, increase quality, ensure safety of aircraft and pilots, and eliminate re-work of units. This equipment meets MILSPEC 810e for all platform components.

**AMAD Test Bench, FA-18 E/F**

The purpose of this project is to replace the FA-18 E/F Airframe Mounted Accessory Drive (AMAD) Test Bench and its ancillary equipment, which tests critical FA-18 E and F AMAD modules that drive fuel pumps, hydraulic pumps, and generators. The AMAD Test Bench tests & verifies the acceptability of repaired/overhauled FA-18 E and F AMADs in accordance with FRC specification NI-F18-022-07. The existing AMAD test bench was down ~ 1279 hours over the last 3 years and is an identified single point of failure, as no other benches of its type exist elsewhere in the Fleet. Per NAVSUP 5900, the useful life of the AMAD test bench is 20 years, and the current AMAD Test Bench is 17 years old.

**H-1 Crane**

The purpose of this project is to design and construct an H-1 Crane. The work includes the furnishing and installation of a 3-ton freestanding electric powered bridge crane. The crane will be in support of a new H-1 Tail Boom Fixture. The crane will support the existing H-1 equipment that is to be relocated to its new working facility. No crane is present in the new location and one is needed for everyday operations to support the H-1 equipment.

**ASKARS Stackers B137**

The purpose of this project is to replace the Automated Storage Kitting and Retrieval System (ASKARS) Large Item Stacker (LIS) and Special Large Item Stacker (SLIS), with associated control software and hardware. The cranes include optical data communication allowing for a wireless connection to the cranes. These two material handling systems consists of a trolley and crane to robotically store or retrieve large components among stacks of shelving delivering them to or from a conveyed staging platform. Supported workload: All aircraft platforms. These stackers are the only remaining devices not replaced from the original installation of ASKARS equipment around 1980. They have not been mechanically upgraded. Downtime is a problem due to part failure. The usage and reliance on ASKARS for storing, organizing, kitting and scheduling parts has increased with the depot initiatives to improve production delivery schedules.

**RotorHead Liquid Penetrant Inspection System**

The purpose of this project is to replace the existing Rotor Head Liquid Penetrant Inspection System. The Liquid Penetrant line is the primary inspection station for various Flight Safety Components and is therefore critical to the overall safety of the aircraft. It also serves as a backup station for flight critical engine and rotating components requiring ultra-high sensitivity. The current workload for the penetrant system is 17,262 hr. /yr. and the future workload is 18,898 hours. There will be improvements in reliability due to fewer deficiencies. A change from a manual system to a semi-automated system will improve efficiency and consistency. Process time will decrease with a new machine since deficiencies will be eliminated.

**Linear Actuator Test Stands (2)**

The purpose of this project is to replace the existing Actuator Test Stands (2 Total). The purpose of the test stand is to RFI Fleet Aerospace Actuators; check for full operational functions, including Tension & Compression load tests and full Stroke Extension test of the F/A-18 (A thru F) Navy/Air Force, E-2/C-2, and P-3 Model Aircraft. The test stand shall have the capability to support Small/Large Electro-Mechanical Linear Actuators for various aircraft platforms. The two existing test stands are currently operational. However, the test stands are 32 and 42 years old, replacement parts are unavailable, and used parts cannibalized from other non-operational test stands throughout the fleet.

**Wire Electrical Discharge Machining (EDM) System**

The purpose of this project is to procure a new Wire Electric Discharge Machining (EDM) System. The machine supports FA-18, H60, E2/C2, V22, and H53 programs. The Wire EDM System is the only piece of equipment currently utilized to cut sheet metal, cork kits, cut slots, and tombstone repair. ) New technology has rotary table with better operating system which will improve quality, reduce set-up time and turn-around time by 1/3, more importantly provide safe and precision cutting operations.

**Robotic Plasma Spray and Grit System**

The purpose of this project is to upgrading the existing Robotic Plasma Spray and Grit System. The system removes and applies new layer of nickel material on Rotor spools, turbine and compressor cases, levers, and blades that no longer meet specifications. This system robotically moves large pieces through the removal and application process. The process is performed post LM2500 engine tear down, and inspection. The Plasma Spray and Grit system supports the LM2500 Program. Upgrading the current system will increase readiness, eliminating manually repositioning of parts, and will increase throughput by 20%. The current system is a single point of failure.

**Field Emission Scanning Electron Microscope (FESEM)**

The purpose of this project is procure a Field Emission Scanning Electron Microscope (FESEM). The current scanning electron microscope is outdated. The software is out of date, new model is capable of producing reports that will benefit the customer on identifying where the problem is within the aircraft and isolate the precise area that needs either work or replacement. It also has an updated version of crash predictability that could help the feel on determining the amount of work or faults within the aircraft. Electron microscope analysis allows FRC to discover causes for crashes, predict potential material failure, and identify material problems. If there is no support for this capability, the Navy will lose the ability to reduce flight failure and increase the danger that the pilot can be while flying the aircraft in that condition.

**Actuator Test Stand**

The purpose of this project is to procure a new Actuator Test Stand. The new Actuator Test Stand will help prevent workload disruptions. This test stand supports the F-5 program the actuator test stand is an essential and only piece of equipment used to test the wing fold actuator systems within the method of flight training. The Actuator shop processes about forty-five (45) F-5 wing fold actuators a quarter. Without a new test stand, the delivery timetables will increase as well as production costs, and loss of capability, as well as the readiness of the fleet.

**Stratasys Fortus - 900MC 3D Printer**

The purpose of this project is to procure a Stratasys Fortus -900MC 3D Printer. The manufacturing programming office needs to replace their older 3D printers. Their current printer is old and the cost of repair is no longer economical. The OEM stated the equipment end of life is 2021. The 3D printer prints form blocks to support the different hydroforming machines. These form blocks support sheet metal fabrication. The newer 3D printers have print spaces that are 4 times larger. This means the FRC can print 4 blocks without having to return to programming and setup. It reduces human delays by 75%. This larger print surface allows for large prints as well. Larger sheet metal plates can be formed on the hydroforming.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Select Business Area	#002 - ADPE						Fleet Readiness Centers		
ADP Equipment	FY 2022			FY 2023			FY 2024		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Computer Hardware (Production)	2	1,153	\$2,306	1	3,000	\$3,000	0	-	\$0
Computer Hardware (Network)	1	3,600	\$3,600	0	-	\$0	1	720	\$720
Computer Software (Operating System)	0	-	\$0	0	-	\$0	0	-	\$0
Telecommunications	0	-	\$0	0	-	\$0	0	-	\$0
Other Support Equipment	0	-	\$0	0	-	\$0	0	-	\$0
<b>Total</b>	<b>3</b>	<b>1,969</b>	<b>\$5,906</b>	<b>1</b>	<b>3,000</b>	<b>\$3,000</b>	<b>1</b>	<b>720</b>	<b>\$720</b>
<b>Justification:</b>									
<p>As the Department of the Navy's provider of depot level maintenance, repair, overhaul, &amp; 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.</p> <p>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.</p> <p><b>Examples of Computer Hardware (Production):</b></p> <p><b>Centralized Network Storage Replacement</b>  The purpose of this project is to address the technical refresh of both Centralized Network Storage and backup appliances directly supporting the RDT&amp;E network at the FRC. These devices provide share drive access, application file storage, server storage, user session storage, and backup data in a redundant, fault tolerant solution. There is a strong consideration to replace the Dell compliant with an all-flash disk array. Time and technology maturation have allowed flash disk (or SSD) to be sold at a lower price. SSD is still significantly more costly than mechanical drives; however, the performance between the two is significantly diverse.</p> <p><b>Automated Eddy Current Machine EC2000 (4)</b>  The purpose of this procurement is to upgrade of Automated Eddy Current Machines EC2000 for the non-destructive shop. The project will replace existing components to remain sustainable and avoid capacity lost when machines start to decline. Upgrade equipment to supportable sustainable components.</p>									

**Examples of Computer Hardware (Network):**

**Replace Switch Infrastructure**

The purpose of this project is to replace all RDT&E Network transport layer equipment to include network switches, network routers, and network firewalls. Interface with the NMCI network is minimal. The intent is to procure devices that support multiple fiber optics, optics being the transmitter emanating light through the glass medium (i.e. fiber). The bandwidth capacity directly correlates with the light generated by the optic; the switch chassis (specifically) is what powers the optic. Current technology offers switches that can power multiple optics vice being locked into one capacity.

**RDT&E Secure Switch Implementation System**

The purpose of this project is to build a reliable RDT&E Secure Switch Implementation System network infrastructure to support production activities by means of installing up to date secure switching infrastructure. The project affects F-18 E/F as well as other system/programs. The new infrastructure supports enhanced network security and upgraded bandwidth to support Aviation Product Life Cycle Management (AVPLM).

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Select Business Area	#004 - Minor Construction						Fleet Readiness Centers		
Minor Construction	FY 2022			FY 2023			FY 2024		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Replacement	0	-	\$0	0	-	\$0	0	-	\$0
New Construction	2	589	\$1,178	3	4,908	\$14,724	2	2,428	\$4,855
Environmental Capability	0	-	\$0	0	-	\$0	0	-	\$0
<b>Total</b>	<b>2</b>	<b>589</b>	<b>\$1,178</b>	<b>3</b>	<b>4,908</b>	<b>\$14,724</b>	<b>2</b>	<b>2,428</b>	<b>\$4,855</b>
<b>Justification:</b>									
<p>As the Department of the Navy's provider of depot level maintenance, repair, overhaul, &amp; 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.</p> <p>Budgeted projects are for construction, expansion, or improvement of a complete and useable building, structure, or other real property.</p> <p><b>Examples of New Construction purchases include:</b></p> <p><b>Construct - Security Processing &amp; Ops Center</b>  The purpose of this project is to construct a replacement security facility for central housing and operational support for the FRC personnel and visitors. The new facility will house employee and visitor processing, IT security, and 24/7 building monitoring. The new facility will be approximately 4,000 SF.</p> <p><b>Design - Large Surface Component Storage Facility</b>  The purpose of this project is to construct an estimated 4,000 - 6,000 SF storage facility. The facility will be climate controlled and designed to store trainer aircraft parts, flight controls, surfaces, kits, crates, tools, dollies, and other production related equipment. The project will provide the needed storage space, as workload increases for the trainer program will exceed the available hanger storage areas.</p> <p><b>Ground Check Structures</b>  The purpose of this project is to construct 5 tension fabric structures for ground check operations on the flight line. 4 structures will be in the movement area, there other structure will be in the non-movement area and provide containment for fuel checks. The huts are designed to support multiple A.C Platforms. Solar power lighting and T6 high power morning eyes will be incorporated to the 4 shelters located in the movement area. The sheltered exterior workspace will lead to quality of life increase.</p> <p><b>Construct Large Surface Component Storage Facility</b>  The purpose of this project is to construct a ~5,500 SF storage facility. The facility will be climate controlled and designed to store trainer aircraft parts, flight controls, surfaces, kits, crates, tools, dollies, and other production related equipment. More storage space will allow increase workflow as the hangar floor can be dedicated exclusively to production and aircraft.</p>									

**CAPITAL BUDGET EXECUTION  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - FLEET READINESS CENTERS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2022	1	Non ADP		\$35.218	\$35.695	\$0.477	
			Quality Control/Testing	\$9.553	\$10.022	\$0.469	2 new, 1 increase
			Machinery	\$6.748	\$7.756	\$1.008	2 new, 1 increase, 1 decrease
			Support Equipment	\$18.917	\$17.917	(\$1.000)	1 increase, 2 deferred
	2	ADP		\$5.100	\$5.906	\$0.806	
			Computer Hardware (Production)	\$3.600	\$2.306	(\$1.294)	1 new, 1 decrease, 1 deferred
			Computer Hardware (Network)	\$1.500	\$3.600	\$2.100	1 new, 1 deferred
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$5.800	\$1.178	(\$4.622)	
			Replacement	\$5.500	\$0.000	(\$5.500)	1 deferred
			New Construction	\$0.300	\$1.178	\$0.878	1 new, 1 decrease
<b>TOTAL FY 2022 CIP Program</b>				<b>\$46.118</b>	<b>\$42.779</b>	<b>(\$3.339)</b>	
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2023	1	Non ADP		\$37.543	\$26.819	(\$10.724)	
			Installation Security	\$4.140	\$0.000	(\$4.140)	1 deferred
			Quality Control/Testing	\$0.000	\$1.500	\$1.500	1 new
			Machinery	\$21.484	\$6.637	(\$14.847)	5 deferred, 1 increase, 1 decrease
			Support Equipment	\$11.919	\$18.682	\$6.763	2 deferred, 1 new, 8 increase, 1 decrease
	2	ADP		\$3.000	\$3.000	\$0.000	
			Computer Hardware (Production)	\$3.000	\$3.000	\$0.000	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$4.000	\$14.724	\$10.724	
			New Construction	\$4.000	\$14.724	\$10.724	2 new
<b>TOTAL FY 2023 CIP Program</b>				<b>\$44.543</b>	<b>\$44.543</b>	<b>\$0.000</b>	
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2024	1	Non ADP		\$0.000	\$43.929	\$43.929	
			Quality Control/Testing	\$0.000	\$15.936	\$15.936	
			Machinery	\$0.000	\$5.271	\$5.271	
			Support Equipment	\$0.000	\$22.722	\$22.722	
	2	ADP		\$0.000	\$0.720	\$0.720	
			Computer Hardware (Network)	\$0.000	\$0.720	\$0.720	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$0.000	\$4.855	\$4.855	
			New Construction	\$0.000	\$4.855	\$4.855	
<b>TOTAL FY 2024 CIP Program</b>				<b>\$0.000</b>	<b>\$49.504</b>	<b>\$49.504</b>	

**SOURCES OF NEW ORDERS & REVENUE  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - FLEET READINESS CENTERS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	FY 2022 -----	FY 2023 -----	FY 2024 -----
1. New Orders	2,978.1	3,014.0	3,125.9
a. Orders from DoD Components:	2,147.6	2,147.3	2,265.8
Department of the Navy	2,073.7	2,069.1	2,202.6
O & M, Navy	1,663.3	1,625.9	1,760.8
O & M, Marine Corps	0.0	0.0	0.0
O & M, Navy Reserve	52.1	75.9	84.0
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	210.1	343.6	332.4
Weapons Procurement, Navy	0.0	0.5	0.4
Ammunition Procurement, Navy/MC	0.7	0.5	0.4
Shipbuilding & Conversion, Navy	9.3	1.2	2.2
National Sea Base Deterrence Fund	0.0	0.0	0.0
Other Procurement, Navy	21.5	4.6	3.9
Procurement, Marine Corps	0.0	0.0	0.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	36.4	15.4	18.3
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.0	0.0	0.0
Foreign Cooperative Projects, Navy	0.0	0.0	0.0
Other Navy Appropriations	80.2	1.7	0.1
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	3.4	4.3	3.2
Army Operation & Maintenance	0.5	3.2	3.2
Army Res, Dev, Test, Eval	0.0	0.0	0.0
Army Procurement	0.0	0.0	0.0
Army Other	2.9	1.1	0.0
Department of the Air Force	68.1	73.3	59.4
Air Force Operation & Maintenance	53.9	69.8	56.4
Air Force Res, Dev, Test, Eval	3.6	0.0	0.0
Air Force Procurement	10.6	3.5	3.1
Air Force Other	0.0	0.0	0.0
DOD Appropriation Accounts	2.4	0.5	0.5
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	1.3	0.0	0.0
Res, Dev, Test & Eval Accounts	0.1	0.6	0.5
Procurement Accounts	0.9	0.0	0.0
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	0.1	0.1	0.0
b. Orders from other Fund Activity Groups	667.2	699.3	691.5
c. Total DoD	2,814.8	2,846.6	2,957.2
d. Other Orders:	163.3	167.4	168.7
Other Federal Agencies	7.0	0.3	0.3
Foreign Military Sales	61.0	41.3	42.5
Non Federal Agencies	95.2	125.7	125.8
2. Carry-In Orders	1,467.5	1,682.0	1,764.2
3. Total Gross Orders	4,445.6	4,695.9	4,890.1
a. Funded Carry-Over before Exclusions	1,682.0	1,764.2	1,951.2
4. Revenue(-)	2,763.7	2,931.8	2,938.9
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	192.3	210.4	226.1
7. Funded Carryover	1,478.7	1,553.8	1,725.1

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

CARRYOVER RECONCILIATION  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - FLEET READINESS CENTERS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)

<b>Fund 11a. Carry Over Reconciliation (\$ in Millions)</b>			
<b>A. Carry Over Calculation Categories</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
1. Total New Orders	2,978.1	3,014.0	3,125.9
2. Net Carry-in Orders	1,467.5	1,670.9	1,764.2
<b>3. Total Gross Orders (Lines 1 + 2)</b>	<b>4,445.6</b>	<b>4,684.9</b>	<b>4,890.1</b>
4. Revenue	2,774.7	2,920.7	2,938.9
<b>5. Carryout (Line 3 - Line 4)</b>	<b>1,670.9</b>	<b>1,764.2</b>	<b>1,951.2</b>
6. Workload Completed per Month (Line 4 ÷ 12)	231.2	243.4	244.9
<b>7. Months of Carryover (Line 5 ÷ Line 6)</b>	<b>7.2</b>	<b>7.2</b>	<b>8.0</b>

<b>Carryover Legend:</b>	≤3	>3 and <5	≥5 and <7	≥7 and <8	≥ 8
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<b>B. Carryover \$ Value &amp; Months by Location</b>	<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024</b>	
Activity	\$ Value	Months	\$ Value	Months	\$ Value	Months
1. FRC East	\$ 567.6	7.6	\$ 617.5	7.4	\$ 633.6	7.9
2. FRC South East	\$ 564.6	6.0	\$ 603.8	6.0	\$ 716.2	6.9
3. FRC SouthWest	\$ 538.7	8.7	\$ 542.9	9.1	\$ 601.3	10.0

<b>C. Carryover \$ Value by Appropriation &amp; Service</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<b>Carryout</b>	\$ 1,670.9	\$ 1,764.2	\$ 1,951.1
<b>1. Operation and Maintenance</b>	\$ 633.5	\$ 657.3	\$ 767.7
a. Army	\$ 1.1	\$ 1.1	\$ 1.1
b. Navy	\$ 596.7	\$ 617.4	\$ 728.3
c. Marine Corps	\$ 0.2	\$ 0.2	\$ 0.2
d. Air Force	\$ 35.5	\$ 38.4	\$ 38.0
e. DOD	\$ 0.1	\$ 0.1	\$ 0.1
<b>2. Procurement</b>	\$ 195.6	\$ 241.5	\$ 275.7
a. Army	\$ -	\$ -	\$ -
b. Navy	\$ 185.8	\$ 233.7	\$ 267.8
c. Marine Corps	\$ -	\$ -	\$ -
d. Air Force	\$ 6.9	\$ 6.8	\$ 6.9
e. DOD	\$ 2.9	\$ 1.0	\$ 1.0
<b>3. Research and Development</b>	\$ 22.0	\$ 16.9	\$ 15.4
a. Army	\$ 0.0	\$ 0.0	\$ 0.0
b. Navy	\$ 21.3	\$ 16.2	\$ 14.7
c. Marine Corps	\$ -	\$ -	\$ -
d. Air Force	\$ 0.4	\$ 0.4	\$ 0.4
e. Other	\$ 0.2	\$ 0.2	\$ 0.2
<b>4. Other</b>	\$ 34.8	\$ 37.5	\$ 37.5
a. Army	\$ 0.1	\$ 1.2	\$ 1.2
b. Navy	\$ 34.6	\$ 36.2	\$ 36.2
c. Marine Corps	\$ -	\$ -	\$ -
d. Air Force	\$ -	\$ -	\$ -
e. DOD	\$ 0.1	\$ 0.0	\$ 0.0
<b>5. No-Year Appropriation</b>	\$ 785.0	\$ 810.9	\$ 854.7

**D. Narrative Justification:** The FRC carryover increase is primarily driven by additional inductions and orders (\$26 M F414 engine, \$6 M FA-18 Hornet, \$2 M F402 engine) above budget estimates for FY 2022-2024. In addition the receipt of \$30.1 M in Ukraine Supplemental Funding for F414 Engine repairs. Prioritization of current year ERP cleanup and documents that had Revenue/Cash impacts over prior year document cleanup of NAVSUP WSS workload. Once complete, the carryover dollars associated with those documents will be reduced which will be reflected in PB-25.

Note: Carryover \$ Value by Service & Appropriation - Include orders from other Services and Customers.

**REVENUE AND EXPENSES  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - FLEET READINESS CENTERS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	2,744.6	2,878.8	2,889.5
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	30.1	41.9	49.4
Other Income			
Total Income	2,774.7	2,920.7	2,938.9
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	11.2	12.0	11.9
Civilian Personnel Compensation & Benefits	1,259.3	1,342.3	1,405.7
Travel and Transportation of Personnel	17.0	12.8	11.3
Material & Supplies (Internal Operations)	646.8	636.0	616.9
Equipment	345.5	593.6	433.4
Other Purchases from NWCF	12.9	14.5	13.6
Transportation of Things	3.5	3.4	1.9
Capital Investment Recovery	30.1	41.9	49.4
Printing and Reproduction	0.4	0.6	0.5
Advisory and Assistance Services	4.4	1.4	1.4
Rent, Communication, Utilities & Misc Charges	58.8	55.2	46.2
Other Purchased Services	400.0	347.3	317.4
Total Expenses	2,790.1	3,060.9	2,909.8
Work in Process Adjustment	73.8	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	2,863.9	3,060.9	2,909.8
Operating Result	-89.2	-140.2	29.1
Adjustments Affecting NOR	-3.8	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)	-3.8	0.0	0.0
Net Operating Result	-93.0	-140.2	29.1
PY AOR	-66.8	-175.1	-87.1
Other Changes Affecting AOR	0.0	15.3	-212.9
Non-Recoverable AOR	0.0	0.0	0.0
Deferred AOR	-15.3	212.9	270.9
AOR for budget purposes	-175.1	-87.1	0.0

**MATERIAL INVENTORY DATA  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - FLEET READINESS CENTERS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

		FY 2022			
		<u>Total</u>	<u>Mobilization</u>	----- Peacetime -----	
				<u>Operating</u>	<u>Other</u>
Material Inventory BOP	\$	28.4	\$ -	\$ 28.4	-
<u>Purchases</u>					
A. Purchases to Support Customer Orders	\$	992.3	\$ -	\$ 992.3	-
B. Purchase of long lead items in advance of customer orders	\$	-	\$ -	\$ -	-
C. Other Purchases	\$	-	\$ -	\$ -	-
D. Total Purchases	\$	992.3	\$ -	\$ 992.3	-
<u>Material Inventory Adjustments</u>					
A. Material Used in Maintenance	\$	1,014.1	\$ -	\$ 1,014.1	-
B. Disposals, theft, losses due to damages	\$	-	\$ -	\$ -	-
C. Other reductions	\$	-	\$ -	\$ -	-
D. Total inventory adjustments	\$	1,014.1	\$ -	\$ 1,014.1	-
Material Inventory EOP	\$	6.6	\$ -	\$ 6.6	-
		FY 2023			
		<u>Total</u>	<u>Mobilization</u>	----- Peacetime -----	
				<u>Operating</u>	<u>Other</u>
Material Inventory BOP	\$	6.6	\$ -	\$ 6.6	-
<u>Purchases</u>					
A. Purchases to Support Customer Orders	\$	1,229.5	\$ -	\$ 1,229.5	-
B. Purchase of long lead items in advance of customer orders	\$	-	\$ -	\$ -	-
C. Other Purchases	\$	-	\$ -	\$ -	-
D. Total Purchases	\$	1,229.5	\$ -	\$ 1,229.5	-
<u>Material Inventory Adjustments</u>					
A. Material Used in Maintenance	\$	1,203.5	\$ -	\$ 1,203.5	-
B. Disposals, theft, losses due to damages	\$	-	\$ -	\$ -	-
C. Other reductions	\$	-	\$ -	\$ -	-
D. Total inventory adjustments	\$	1,203.5	\$ -	\$ 1,203.5	-
Material Inventory EOP	\$	32.6	\$ -	\$ 32.6	-
		FY 2024			
		<u>Total</u>	<u>Mobilization</u>	----- Peacetime -----	
				<u>Operating</u>	<u>Other</u>
Material Inventory BOP	\$	32.6	\$ -	\$ 32.6	-
<u>Purchases</u>					
A. Purchases to Support Customer Orders	\$	1,050.4	\$ -	\$ 1,050.4	-
B. Purchase of long lead items in advance of customer orders	\$	-	\$ -	\$ -	-
C. Other Purchases	\$	-	\$ -	\$ -	-
D. Total Purchases	\$	1,050.4	\$ -	\$ 1,050.4	-
<u>Material Inventory Adjustments</u>					
A. Material Used in Maintenance	\$	1,070.1	\$ -	\$ 1,070.1	-
B. Disposals, theft, losses due to damages	\$	-	\$ -	\$ -	-
C. Other reductions	\$	-	\$ -	\$ -	-
D. Total inventory adjustments	\$	1,070.1	\$ -	\$ 1,070.1	-
Material Inventory EOP	\$	13.0	\$ -	\$ 13.0	-

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## Marine Corps Depots - Exhibits

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**CHANGES IN THE COSTS OF OPERATIONS  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - MARINE CORPS DEPOTS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2022 Estimated Actuals	<b>242.9</b>
FY 2023 President's Budget:	<b>275.3</b>
Estimated Impact in BY1 of Actual CY Experience:	<b>0.0</b>
Pricing Adjustments:	<b>0.3</b>
Civilian Personnel	0.0
Fuel Price	0.3
Program Changes:	<b>-10.5</b>
Workload Changes	
Direct Labor	<b>-27.8</b>
Direct Material and Supplies	<b>17.1</b>
Direct Contract Services	<b>1.5</b>
Direct Other Purchases	<b>-1.3</b>
Other Changes:	<b>10.5</b>
Capital Investment Recovery	2.2
Facilities Sustainment, Restoration & Modernization	-2.8
Other (list)	0.0
Indirect Labor	9.6
Indirect Materiel	-3.5
Indirect Contract Services	5.4
VERA/VSIP	-0.7
Travel/Training	0.3
FY 2023 Current Estimate:	<b>275.6</b>
Pricing Adjustments:	<b>2.6</b>
Annualization of Prior Year Pay Raises	<b>0.0</b>
Civilian Personnel	0.0
Military Personnel	0.0
FY 2023 Pay Raise	<b>2.3</b>
Civilian Personnel	2.3
Military Personnel	0.0
Fuel Price Changes	0.1
General Purchase Inflation	0.2
Other Price Changes (list)	<b>0.0</b>
Working Capital Fund Price Changes	0.0
Productivity Initiatives and Other Efficiencies:	<b>0.0</b>
Program Changes:	<b>0.7</b>
Direct Labor	<b>-1.4</b>
Direct Materiel & Supplies	<b>2.1</b>
Direct Contract Services	<b>0.0</b>
Direct Other Purchases	<b>0.1</b>
Other Changes:	<b>-12.4</b>
Capital Investment Recovery	-0.3
Facilities Sustainment, Restoration & Modernization	-0.6
Change in work days	0.0
Civilian Equivalency Rate Changes	0.0
Other:	
Indirect Labor	-6.5
Indirect Materiel	-0.5
Indirect Contract Services	-4.4
Indirect Other Purchases	0.0
FY 2024 Estimate:	<b>266.4</b>

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**DEPOT MAINTENANCE SIX PERCENT CAPITAL INVESTMENT PLAN  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - MARINE CORPS DEPOTS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	<u>REVENUE</u> (Maintenance, Repair, Overhaul) <u>3 year average</u>			<u>BUDGETED CAPITAL</u> (Modernization, Efficiency)		
	<u>FY 19-21</u>	<u>FY 20-22</u>	<u>FY 21-23</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
<b>Revenue (Avg)</b>	334.6	291.8	262.7			
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			
<b>WCF Depot Maintenance Capital Investment</b>						
Facilities/ Work Environment				3.4	7.0	5.1
Equipment				6.7	8.5	7.0
Equipment (Non-Capital Investment Program)				0.0	1.4	1.0
Processes				0.0	3.0	0.0
Total WCF Investment				10.2	19.9	13.1
<b>Appropriated Funding - List by Appropriation</b>						
MILCON				0.0	0.0	0.0
Procurement				0.0	0.0	0.0
Operation & Maintenance				0.0	0.0	0.0
Total Appropriated Funding				0.0	0.0	0.0
<b>Component Total</b>				10.2	19.9	13.1
Minimum 6% Investment				20.1	17.5	15.8
<b>Investment Over/Under Requirement</b>				-9.9	2.4	-2.6
				3.0%	6.8%	5.0%

**CAPITAL INVESTMENT SUMMARY**  
**DEPARTMENT OF THE NAVY**  
**DEPOT MAINTENANCE - MARINE CORPS DEPOTS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

Line #	Description	FY 2022		FY 2023		FY 2024	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	Non-ADPE and Telecom Equipment >= \$.250M	2	\$6.497	4	\$8.500	2	\$7.000
	- Support Equipment	2	\$6.497	4	\$8.500	2	\$7.000
2	ADPE and Telecom Equipment >= \$.250M	0	\$0.000	0	\$0.000	0	\$0.000
3	Software Development >= \$.250M	0	\$0.000	0	\$0.000	0	\$0.000
4	Minor Construction (>= \$.250M and <= \$2.000M)	0	\$0.000	1	\$1.900	1	\$1.500
	- Replacement Capability	0	\$0.000	1	\$1.900	0	\$0.000
	- New Construction	0	\$0.000	0	\$0.000	1	\$1.500
	<b>Grand Total</b>	2	\$6.497	5	\$10.400	3	\$8.500
	<b>Total Capital Outlays</b>		\$0.338		\$6.264		\$4.700
	<b>Total Capital Investment Recovery</b>		\$6.801		\$7.721		\$7.417

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)				MARCH 2023						
Department of the Navy/ Depot Maintenance		#001 - Non-ADPE				Marine Corps Depots				
Non-ADP Equipment		FY 2022			FY 2023			FY 2024		
		Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Vehicles		0	-	\$0	0	-	\$0	0	-	\$0
Material Handling		0	-	\$0	0	-	\$0	0	-	\$0
Installation Security		0	-	\$0	0	-	\$0	0	-	\$0
Quality Control/ Testing		0	-	\$0	0	-	\$0	0	-	\$0
Medical Equipment		0	-	\$0	0	-	\$0	0	-	\$0
Machinery		0	-	\$0	0	-	\$0	0	-	\$0
Support Equipment		2	3,249	\$6,497	4	2,231	\$8,923	2	3,500	\$7,000
<b>Total</b>		<b>2</b>	<b>3,249</b>	<b>\$6,497</b>	<b>4</b>	<b>2,231</b>	<b>\$8,923</b>	<b>2</b>	<b>3,500</b>	<b>\$7,000</b>
<p><b>Justification:</b></p> <p><b>Support Equipment:</b> FY 2022</p> <p><b>Robotic De-Paint (Hull) System (PPA) - \$5.725M.</b> A new robotic laser ablation system to improve the productivity and quality of paint removal (de-paint) operations at PPA. Goal is a stable and uniform paint/coating removal, reduced cycle time and material, maintenance and labor savings. The robotic laser ablation de-paint system will reduce material (blast media) costs by 100% with 0% waste and in the ability of the robot to ensure an exact amount of paint/coating is removed from the hull surfaces. The robotic system will reduce labor costs by 50% with one artisan being required to remove paint from two hulls. Artisan requirements will be limited to operating control system in an environmentally conditioned control room ensuring the correct program loaded/utilized and providing oversight of the robot to ensure it is working as expected. The robotic laser ablation system will reduce operations and maintenance costs associated with current manual grit blasting operation (blasting equipment, dust collection, breathing air equipment, PPE, etc... by 100%. The robotic laser ablation system will be six to eight times faster as the robotic system can remove paint/coating far quicker than an artisan on a unit basis.</p> <p><b>An Economic Analysis and Cost Analysis was complete for this project.</b> <b>BIR: 1.65; Total Benefits (Current Dollars): \$7.2M</b></p> <p><b>Modernize Equipment at IWTRF (PPB) \$349K.</b> The Reverse Osmosis Reject Water (aka Brine) supplies the evaporative basins via two inch CPVC piping strapped to the inside of the basin walls. This piping was installed with the plant and has been suffering intermittent failure in recent years due to physical distortion from ultra-violet exposure. As the pipes bend stresses are applied at the joint coupling. The coupling is a slip fitting held together by CPVC cement. Once enough force accumulates on the joint to break the bond and pull the joint apart. This produces a leak and brine fills the wrong basin. The current solution is to replace the slip fitting with a compression fitting. The proposed solution uses threaded pipe to strengthen the joint in conjunction with additional strapping. This will reduce downtime, overtime, and eliminate the cost of processing wastes off-site during failure events.</p> <p><b>An Economic Analysis and Cost Analysis was complete for this project.</b> <b>BIR: 1.22; Total Benefits (Current Dollars): \$1.4M</b></p>										

**Support Equipment:  
FY 2023**

**Industrial Shredder (PPB) - \$423K. This was an approved FY20 carryover project.** This is the same FY20 Industrial Shredder project that is listed under FY22 Support Equipment. Funding was required for this project in both FY22 and FY23. Currently, material is stored on pallets, bins/roll-offs, or any other available space as necessary. In a production environment space is a constraint. Not optimizing the amount of space available limits production throughput. The purchase of an industrial shredding machine would provide us with direct control over our recycling processes and benefit PPB by greatly reducing the footprint of materials staged for disposal at any given time. It would also allow develop the capability to be able to demilitarize material in house rather than outsource the service. All of these actions would allow the increase of production throughput/reduce cycle time.

**Robotic Paint System (PPA) - \$4M.** All painting is done by hand by artisans with nozzles which are fed by plant air. Each artisan must wear PPE to include a hood with positive pressure breathing air, or a man-pack breathing unit. Due to safety requirements, artisans are limited in the time they can spend in their PPE, more so during the warm months of the year (Apr – Oct). This is a labor-intensive process which wastes a large of amount of blast media. A new robotic system to improve the productivity and quality of painting operations at PPA. Goal is a stable and uniform paint quality, limited cycle time and labor savings. The automated system will reduce material (paint) costs by 50% with less waste and in the ability of the robot to ensure an exact amount of paint is applied to the surfaces being painted. The automated system will reduce labor costs by 75% with one artisans being required to monitor two painting booths. Artisan requirements will be limited to ensuring the correct program loaded/utilized and providing oversight of the robot to ensure it is working as expected. The automated system will reduce operations and maintenance costs of blasting equipment, breathing air equipment, PPE, etc... by 10%. The automated system will be six to eight times faster as the robotic system can paint quicker than an artisan on a unit basis.

**An Economic Analysis and Cost Analysis was complete for this project.**

**BIR: 2.47; Total Benefits (Current Dollars): \$10.9M**

**Waterjet (PPB) - \$1M.** Production Plant Barstow has instituted best business practices to improve production, scheduling, quality, and repair cycle times. At times our existing cutting machines are not sufficient to keep up with production demands, due to inoperability and down time, which adversely affects the shop's daily operations and their ability to meet production schedules. The existing water jet is nearing the end of its useful lifecycle and is becoming more challenging to maintain due to obsolescence issues. The availability of replacement parts is limited due to the age of the equipment (12+ years old). With each down time event the impact is felt on production and well as more wear on similar equipment that is now run longer hours to compensate for this unplanned downtime. A new waterjet system would enable the shop to increase throughput of metal cutting supporting fabrication, ultimately decreasing the amount of time it takes to fabricate a subcomponent and improving return cycle time of components for AAV's, LAV's, LVSR's and MATV vehicles along with other principle end items by 33% percent and would add much needed redundancy and backup of aged equipment nearing the end of its' life cycle. The new system will also allow for the level loading of workload across equipment to minimize excessive wear to a single piece of equipment.

**An Economic Analysis and Cost Analysis was complete for this project.**

**BIR: 6.34; Total Benefits (Current Dollars): \$3.3M**

**Air Pollution Control System (PPB) – \$3.5M** Production Plant Barstow has instituted best business practices and process improvement projects to improve production, scheduling, quality, and repair cycle time. In order to accomplish this objective we must be diligent in maintaining, repairing and replacing antiquated equipment and support systems that are near the end of their expected life cycles to ensure our older systems don't prematurely fail without us having a plan in place. All of the Air Pollution Control Systems (APCS) that support our painting operations are considered to be critical equipment, because we have no redundancy in the way they are configured. This project would not only replace antiquated equipment, but also add the much needed redundancy within our painting operations. In order to be in compliance with the Mojave Desert Air Quality Management District permitting, paint booths are required to be connected to air pollution controls systems that destroys volatile organic compounds, basically, cleaning the air prior to being emitted to the atmosphere. In the event the system is non-operational, the Production Plant Paint Shop loses nearly 70% of its painting capability. Current air pollution control systems are between 13 and 18 years old and are approaching the end of their useful life. When the Plant does experience downtime due to this system, it is cumbersome to troubleshoot and repair due to the less than ideal controls and condition monitoring lengthening the time it takes to troubleshoot, and ultimately increasing downtime and return cycle time. This system lacks the automatic features available with new systems as well as health monitoring features that would allow for condition/predictive maintenance extending the life of the equipment and uptime of the Plant's painting capabilities.

**An Economic Analysis and Cost Analysis was complete for this project. BIR: 1.75; Total Benefits (Current Dollars): \$2.7M**

**Support Equipment:**

**FY 2024**

**Robotic De-Paint (Component) System (PPA) - \$4M.**

A new Robotic Laser Ablation System to improve the productivity and quality of paint removal (de-paint) operations at PPA. Goal is a stable and uniform paint/coating removal, reduced cycle time and material, maintenance and labor savings. The robotic laser ablation de-paint system will reduce material (blast media) costs by 100% with 0% waste and in the ability of the robot to ensure an exact amount of paint/coating is removed from the component surfaces. The robotic system will reduce labor costs by 50% with one artisan being required to remove paint from two booths worth of components. Artisan requirements will be limited to operating control system in an environmentally conditioned control room ensuring the correct program loaded/utilized and providing oversight of the robot to ensure it is working as expected. The robotic laser ablation system will reduce operations and maintenance costs associated with current manual grit blasting operation (blasting equipment, dust collection, breathing air equipment, PPE, etc... by 100%. The robotic laser ablation system will be six to eight times faster as the robotic system can remove paint/coating far quicker than an artisan on a unit basis.

**An Economic Analysis and Cost Analysis was complete for this project.**

**BIR: 1.65; Total Benefits (Current Dollars): \$7.3M**

**Robotic Paint (Component) System (PPB) - \$3M.**

Marine Depot Maintenance Command – Production Plant Barstow has instituted best business practices to improve production scheduling, quality, and repair cycle time. These cycle times would be greatly reduced to meet worldwide commitments requiring production areas to be optimized to meet and support requirements. The addition of a robotic paint system would add efficiencies to the current coating process. Current process is labor intensive and requires all painting to be done manually. Current variables in the process (coating thickness, dry time, human error, etc.) can be mitigated with the introduction of robotics. Robotics will also increase throughput while decreasing safety hazards and hazardous material disposal associated with the coating process. A robotic system allows coatings to be applied evenly and minimizes rework and overall dry time. As a result of decreased drying time, return cycle time also improves. Due to the advancement of robotics, systems can now be installed in tighter spaces as to not take away a large amount of paint booth space and can be customized for nearly any purpose. The coating process is labor intensive and with introduction of robotics the production plant will be able reduce the ergonomic concerns employees face that come with the painting process. The new robotic paint booth will also be equipped with the latest technology for improved safety and efficiency. All painting is currently performed manually by artisans which is costly and labor intensive. Robotic paint technology is used though out manufacturing industries to remove hazards related to painting, reduce costs, improve efficiencies and finish quality for parts of all sizes and shapes. It is especially useful where there is a high volume of repeatability. This project will provide and install a complete and usable robotic painting system and associated equipment necessary for painting. The system shall be incorporated into the current operation. The system must conform to local air quality standards and requirements. Training shall be provided for programming, operation and maintenance. A new robotic painting system to improve the productivity and quality of paint operations at PPB. The goal is a stable and uniform painting process, reduced cycle time and material, maintenance and labor savings.

**An Economic Analysis and Cost Analysis was complete for this project.**

**BIR: 1.03; Total Benefits (Current Dollars): \$3.9M**

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Department of the Navy/ Depot Maintenance		#004 - Minor Construction				Marine Corps Depots			
Minor Construction	FY 2022			FY 2023			FY 2024		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Replacement	0	-	\$0	1	1,900	\$1,900	0	-	\$0
New Construction	0	-	\$0	0	-	\$0	1	1,500	\$1,500
Environmental Capability	0	-	\$0	0	-	\$0	0	-	\$0
<b>Total</b>	<b>0</b>	<b>-</b>	<b>\$0</b>	<b>1</b>	<b>1,900</b>	<b>\$1,900</b>	<b>1</b>	<b>1,500</b>	<b>\$1,500</b>
<p><b>Justification:</b>  <b>FY2023:</b>  <b>Modernize B598 Electrical Infrastructure, (PPB) \$1.9M</b> - Production Plant Barstow has instituted best business practices to improve production, scheduling, quality, and repair cycle time to support Marine Corps efforts to repair and overhaul systems for the entire equipment lifecycle. To support the mission, the Engineering Division at Production Plant Barstow (PPB) has identified the need for upgrade of the existing electrical infrastructure of Building 598 as it is aging, outdated, frequently failing and down for extended periods of time. The power is often out or voltages have wide range fluctuations that is detrimental to operating of precise and sensitive electrical equipment. The overall system is in serious need of upgrade and multiple repair in order for the shop to maintain continuous operational capability and support of MDMC workload. The majority current electrical infrastructure in the buildings dates back to the facility's construction in 1969. Overtime the outdoor electrical components have deteriorates with age and being exposed to the elements. Indoor components have deteriorated due to age, and mechanical piping failures in the same areas have also caused damage (safety hazards located in existing mechanical/electrical room). This project is intended to remedy the facilities electrical infrastructure related problems and alleviate the risks of unplanned power fluctuations, outages, and inadvertent damage to electrical components caused by mechanical systems. Clean, reliable power is important in order to maintain the quality standards that are established and mandated by the Department of the Navy and the American National Standards Institute  <b>An Economic Analysis and Cost Analysis was complete for this project.</b>  <b>SIR: 7.15; Total Benefits (Current Dollars): \$6.1M</b></p> <p><b>FY2024</b>  <b>Optics Sighting Facility, (PPB) \$1.5M</b>  Production Plant Barstow has instituted best business practices to improve production, scheduling, quality, and repair cycle time. To support Marine Corps efforts to repair and overhaul systems returning from theatre, workload has increased. This requires that worldwide commitments requiring production areas be optimized to meet support requirements. The length of the assets range from approximately 2' x 2' in length to 3' x 3' in length on multiple vehicles and assets (LAV &amp; M777) which is has the greatest variance of any being worked in the facility. Due to the length and maneuverability of the assets, it is currently worked in the elements with minimal coverage in 2 different locations. The size of the work area negatively affects the repair cycle time and is a cause of rework. The small work area limits the activities that can take place under sunshades. Hours are wasted by moving assets into an uncovered area to access the vehicle with no fall protection. Furthermore, the minimum availability of utilities and adequate cover delays completion repair/installation tasks and ultimately the completion of the assets. The proposed site currently contains two sunshades covering approximately 1000 SF. Given the extremely high temperatures (110°F+) during summer months work is forced to slow/stop due to the extreme outdoor temperatures for personnel and limiting work that can be performed on assets/components/material with temperatures greater than 120°F. The covered area is not large enough to meet production demands and the old sun shades require routine maintenance to prevent them from becoming a safety hazard since they are exposed to the elements. The proposed structure will be constructed with pre-engineered steel framing and reinforced concrete support column footers 3 bay doors and 2 hanger doors. The structure will be equipped with high-bay LED lighting, fire suppression, and utilities and provide approximately 4,225 SF of coverage.  <b>An Economic Analysis and Cost Analysis was complete for this project.</b>  <b>BIR: 1.97; Total Benefits (Current Dollars): \$12.2M</b></p>									

**CAPITAL BUDGET EXECUTION  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - MARINE CORPS DEPOTS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2022	1	Non ADP		\$6.125	\$6.497	\$0.372	
			Support Equipment	\$6.125	\$6.497	\$0.372	Robotic De-paint increased to \$5.725M. Industrial Wastewater Treatment Recycling Facility decreased to \$349K. Industrial Shredder, carryover project from FY20, required additional \$423K in FY22 for this project (approved carryover)
	2	ADP		\$0.000	\$0.000	\$0.000	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$0.000	\$0.000	\$0.000	
<b>TOTAL FY 2022 CIP Program</b>				<b>\$6.125</b>	<b>\$6.497</b>	<b>\$0.372</b>	
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2023	1	Non ADP		\$8.500	\$8.500	\$0.000	
			Support Equipment	\$8.500	\$8.500	\$0.000	Robotic Paint System increase to \$ 4M; Waterjet increased to \$1M; Air Pollution Control System moved from FY22 minor construction to FY23 Equip Non ADPE as the equipment cost increased by \$1.7M for this project.
	2	ADP		\$0.000	\$0.000	\$0.000	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$1.900	\$1.900	\$0.000	
			Replacement	\$1.900	\$1.900	\$0.000	Cancelled the 150 space parking lot for \$1.5M; Plan to execute the modernize B598 Electrical Infrastructure at PPB.
<b>TOTAL FY 2023 CIP Program</b>				<b>\$10.400</b>	<b>\$10.400</b>	<b>\$0.000</b>	
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2024	1	Non ADP		\$7.000	\$7.000	\$0.000	
			Support Equipment	\$7.000	\$7.000	\$0.000	Robotic De-Paint System (PPA) \$4M; Robotic Paint System (PPB) \$3M
	2	ADP		\$0.000	\$0.000	\$0.000	
	3	Software		\$0.000	\$0.000	\$0.000	
	4	Minor Construction		\$1.500	\$1.500	\$0.000	
			New Construction	\$1.500	\$1.500	\$0.000	Optics Sighting Facility (PPB)
<b>TOTAL FY 2024 CIP Program</b>				<b>\$8.500</b>	<b>\$8.500</b>	<b>\$0.000</b>	

**SOURCES OF NEW ORDERS & REVENUE  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - MARINE CORPS DEPOTS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	FY 2022 -----	FY 2023 -----	FY 2024 -----
1. New Orders	264.5	245.6	219.2
a. Orders from DoD Components:	247.7	240.6	214.0
Department of the Navy	238.8	237.8	211.0
O & M, Navy	7.0	6.4	6.6
O & M, Marine Corps	210.2	209.7	184.6
O & M, Navy Reserve	0.0	0.0	0.0
O & M, Marine Corp Reserve	14.4	19.1	17.2
Aircraft Procurement, Navy	2.3	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
National Sea Base Deterrence Fund	0.0	0.0	0.0
Other Procurement, Navy	0.0	0.0	0.0
Procurement, Marine Corps	4.1	2.5	2.6
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	0.8	0.0	0.0
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.0	0.0	0.0
Foreign Cooperative Projects, Navy	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	1.2	0.0	0.0
Army Operation & Maintenance	1.2	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	1.0	0.4	0.5
Air Force Operation & Maintenance	1.0	0.4	0.5
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	6.7	2.4	2.5
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	6.7	2.4	2.5
Res, Dev, Test & Eval Accounts	0.0	0.0	0.0
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	16.1	5.0	5.2
c. Total DoD	263.8	245.6	219.2
d. Other Orders:	0.7	0.0	0.0
Other Federal Agencies	0.1	0.0	0.0
Foreign Military Sales	0.6	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
2. Carry-In Orders	217.3	224.0	213.2
3. Total Gross Orders	481.8	469.7	432.3
a. Funded Carry-Over before Exclusions	224.0	213.2	213.0
4. Revenue(-)	257.7	256.5	219.3
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	5.3	2.7	2.0
7. Funded Carryover	218.8	210.5	211.0

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

CARRYOVER RECONCILIATION  
DEPARTMENT OF THE NAVY  
DEPOT MAINTENANCE - MARINE CORPS DEPOTS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
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(DOLLARS IN MILLIONS)

<b>Fund 11a. Carry Over Reconciliation (\$ in Millions)</b>						
<b>A. Carry Over Calculation Categories</b>	<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024</b>	
1. Total New Orders	264.5		245.6		219.2	
2. Net Carry-in Orders	217.3		224.0		213.2	
<b>3. Total Gross Orders (Lines 1 + 2)</b>	<b>481.8</b>		<b>469.7</b>		<b>432.3</b>	
4. Revenue	257.7		256.5		219.3	
<b>5. Carryout (Line 3 - Line 4)</b>	<b>224.0</b>		<b>213.2</b>		<b>213.0</b>	
6. Workload Completed per Month (Line 4 ÷ 12)	21.5		21.4		18.3	
<b>7. Months of Carryover (Line 5 ÷ Line 6)</b>	<b>10.4</b>		<b>10.0</b>		<b>11.7</b>	
<b>Carryover Legend:</b>	≤3	>3 and <5	≥5 and <7	≥7 and <8	≥ 8	
<b>B. Carryover \$ Value &amp; Months by Location</b>	<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024</b>	
Activity	\$ Value	Months	\$ Value	Months	\$ Value	Months
1. MDMC Albany	\$ 150.1	13.4	\$ 143.5	12.4	\$ 146.1	13.7
2. MDMC Barstow	\$ 73.9	7.2	\$ 69.6	7.1	\$ 66.9	8.8
<b>C. Carryover \$ Value by Appropriation &amp; Service</b>	<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024</b>	
<b>Carryout</b>	<b>\$ 224.0</b>		<b>\$ 213.2</b>		<b>\$ 213.0</b>	
<b>1. Operation and Maintenance</b>	<b>\$ 166.6</b>		<b>\$ 175.5</b>		<b>\$ 181.0</b>	
a. Army	\$ 1.8		\$ 0.6		\$ 0.6	
b. Navy	\$ 9.2		\$ 6.1		\$ 6.4	
c. Marine Corps	\$ 149.9		\$ 167.6		\$ 175.1	
d. Air Force	\$ 5.7		\$ 1.1		\$ (1.1)	
e. DOD	\$ -		\$ -		\$ -	
<b>2. Procurement</b>	<b>\$ 16.2</b>		<b>\$ 9.8</b>		<b>\$ 7.4</b>	
a. Army	\$ (0.0)		\$ (0.0)		\$ (0.0)	
b. Navy	\$ 3.2		\$ 1.9		\$ 1.4	
c. Marine Corps	\$ 13.0		\$ 7.9		\$ 6.0	
d. Air Force	\$ -		\$ -		\$ -	
e. DOD	\$ -		\$ -		\$ -	
<b>3. Research and Development</b>	<b>\$ 0.7</b>		<b>\$ 0.2</b>		<b>\$ 0.2</b>	
a. Army	\$ 0.0		\$ 0.0		\$ -	
b. Navy	\$ 0.7		\$ 0.1		\$ 0.0	
c. Marine Corps	\$ -		\$ -		\$ 0.1	
d. Air Force	\$ -		\$ -		\$ -	
e. Other	\$ -		\$ -		\$ -	
<b>4. Other</b>	<b>\$ 3.6</b>		<b>\$ 1.5</b>		<b>\$ 0.8</b>	
a. Army	\$ -		\$ -		\$ -	
b. Navy	\$ -		\$ -		\$ -	
c. Marine Corps	\$ -		\$ -		\$ -	
d. Air Force	\$ -		\$ -		\$ -	
e. DOD	\$ 3.6		\$ 1.5		\$ 0.8	
<b>5. No-Year Appropriation</b>	<b>\$ 36.9</b>		<b>\$ 26.1</b>		<b>\$ 23.6</b>	
<b>D. Narrative Justification:</b>	DMAG carryover was 10.4 months of workload from FY 2022 to FY 2023 and is projected to be 10 months in FY23 and 11.7 months in FY24. The numbers are significantly inflated (by approximately 5 months) due to billing issues within N-ERP. DMAG assumes that once the billing and issues related to direct cost on customer funded lines brought in from DIFMS to N-ERP are corrected, the actual carryover totals will be within the allowable carryover limits.					

Note: Carryover \$ Value by Service & Appropriation - Include orders from other Services and Customers.

**REVENUE AND EXPENSES  
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(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	260.0	248.8	211.9
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	6.8	7.7	7.4
Other Income			
Total Income	266.8	256.5	219.3
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.0	0.8	0.8
Civilian Personnel Compensation & Benefits	132.2	112.1	106.5
Travel and Transportation of Personnel	1.8	1.9	2.2
Material & Supplies (Internal Operations)	76.0	81.9	83.3
Equipment	0.0	4.3	4.3
Other Purchases from NWCF	1.8	0.0	0.0
Transportation of Things	0.0	0.0	0.0
Capital Investment Recovery	6.8	7.7	7.4
Printing and Reproduction	0.0	0.0	0.0
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	11.0	12.0	12.3
Other Purchased Services	14.0	54.8	49.6
Total Expenses	243.6	275.6	266.4
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	243.6	275.6	266.4
Operating Result	23.3	-19.1	-47.1
Adjustments Affecting NOR	-55.1	0.0	0.0
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	-55.1	0.0	0.0
Net Operating Result	-31.2	-19.1	-47.1
PY AOR	-63.6	-94.9	47.1
Other Changes Affecting AOR	0.0	0.0	-161.0
Non-Recoverable AOR	0.0	0.0	0.0
Deferred AOR	0.0	161.0	161.0
AOR for budget purposes	-94.9	47.1	0.0

**MATERIAL INVENTORY DATA**  
**DEPARTMENT OF THE NAVY**  
**DEPOT MAINTENANCE - MARINE CORPS DEPOTS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

**FY 2022**

	<u>Total</u>	<u>Mobilization</u>	----- Peacetime -----	<u>Operating</u>	<u>Other</u>
Material Inventory BOP	\$ 78.8	\$ 0.0	\$ 78.8		\$ 0.0
<u>Purchases</u>					
A. Purchases to Support Customer Orders	\$ 12.4	\$ 0.0	\$ 12.4		\$ 0.0
B. Purchase of long lead items in advance of customer orders	0.0	0.0	0.0		0.0
C. Other Purchases (List)	0.0	0.0	0.0		0.0
D. Total Purchases	\$ 12.4	\$ 0.0	\$ 12.4		\$ 0.0
<u>Material Inventory Adjustments</u>					
A. Material Used in Maintenance	\$ 73.1	\$ 0.0	\$ 73.1		\$ 0.0
B. Disposals, theft, losses due to damages	0.0	0.0	0.0		0.0
C. Other reductions (List)	0.0	0.0	0.0		0.0
D. Total inventory adjustments	\$ 73.1	\$ 0.0	\$ 73.1		\$ 0.0
Material Inventory EOP	\$ 18.1	\$ 0.0	\$ 18.1		\$ 0.0

**FY 2023**

	<u>Total</u>	<u>Mobilization</u>	----- Peacetime -----	<u>Operating</u>	<u>Other</u>
Material Inventory BOP	\$ 18.1	\$ 0.0	\$ 18.1		\$ 0.0
<u>Purchases</u>					
A. Purchases to Support Customer Orders	\$ 70.5	\$ 0.0	\$ 70.5		\$ 0.0
B. Purchase of long lead items in advance of customer orders	0.0	0.0	0.0		0.0
C. Other Purchases	0.0	0.0	0.0		0.0
D. Total Purchases	\$ 70.5	\$ 0.0	\$ 70.5		\$ 0.0
<u>Material Inventory Adjustments</u>					
A. Material Used in Maintenance	\$ 76.2	\$ 0.0	\$ 76.2		\$ 0.0
B. Disposals, theft, losses due to damages	0.0	0.0	0.0		0.0
C. Other reductions	0.0	0.0	0.0		0.0
D. Total inventory adjustments	\$ 76.2	\$ 0.0	\$ 76.2		\$ 0.0
Material Inventory EOP	\$ 12.4	\$ 0.0	\$ 12.4		\$ 0.0

**FY 2024**

	<u>Total</u>	<u>Mobilization</u>	----- Peacetime -----	<u>Operating</u>	<u>Other</u>
Material Inventory BOP	\$ 12.4	\$ 0.0	\$ 12.4		\$ 0.0
<u>Purchases</u>					
A. Purchases to Support Customer Orders	\$ 73.6	\$ 0.0	\$ 73.6		\$ 0.0
B. Purchase of long lead items in advance of customer orders	0.0	0.0	0.0		0.0
C. Other Purchases	0.0	0.0	0.0		0.0
D. Total Purchases	\$ 73.6	\$ 0.0	\$ 73.6		\$ 0.0
<u>Material Inventory Adjustments</u>					
A. Material Used in Maintenance	\$ 78.2	\$ 0.0	\$ 78.2		\$ 0.0
B. Disposals, theft, losses due to damages	0.0	0.0	0.0		0.0
C. Other reductions	0.0	0.0	0.0		0.0
D. Total inventory adjustments	\$ 78.2	\$ 0.0	\$ 78.2		\$ 0.0
Material Inventory EOP	\$ 7.8	\$ 0.0	\$ 7.8		\$ 0.0

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## 2. Supply Management

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**NARRATIVE  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - NAVY  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023**

**Mission Statement/Overview:**

The Navy Working Capital Fund Supply Management (NWCF-SM) business 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 Navy, Marine Corps, and other Department of Defense (DoD) services and customers.

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.

What makes NWCF-SM unique is the Contract Authority (CA) that allows obligation of funds an acquisition lead-time prior to future customer requisitions. Through planning and modeling, this budget aligns with the anticipated customer demands early enough. This results in materiel availability when customers submit orders.

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.

Supply Management for the NWCF consists of two Budget Submitting Offices (BSOs), Navy Supply Systems Command and the Marine Corps, Supply Management Activity Group.

**Naval Supply Systems Command (NAVSUP)**

NAVSUP is Fleet-focused, global postured and ready, integrating Navy's supply chains end-to-end and providing acquisition, operational logistics and Sailor care services with our mission partners to sustain naval forces worldwide.

**NAVSUP Activity Group Composition:**

	<b><u>Location</u></b>
NAVSUP Headquarters	Mechanicsburg, Pennsylvania
NAVSUP Weapon Systems Support (Maritime)	Mechanicsburg, Pennsylvania
NAVSUP Weapon Systems Support (Aviation)	Philadelphia, Pennsylvania
NAVSUP Business Systems Center	Mechanicsburg, Pennsylvania
Navy Exchange Command	Norfolk, Virginia
NAVSUP Fleet Logistics Center	San Diego, California
NAVSUP Fleet Logistics Center	Jacksonville, Florida
NAVSUP Fleet Logistics Center	Norfolk, Virginia
NAVSUP Fleet Logistics Center	Pearl Harbor, Hawaii
NAVSUP Fleet Logistics Center	Puget Sound, Washington

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NAVSUP Fleet Logistics Center  
NAVSUP Fleet Logistics Center

Yokosuka, Japan  
Sigonella, Italy

NAVSUP manages the following Budget Projects (BPs) in order to organize the financial operations of supply management:

	<u><b>Budget Project</b></u>
<b>Wholesale</b>	
Aviation Consumables	BP34
Ship Repairables and Consumables	BP81
Aviation Repairables	BP85
<b>Retail</b>	
Ships' Stores	BP21
General Consumables	BP28
<b>Operations</b>	
Operations and Reimbursables	BP91

**Marine Corps, Supply Management Activity Group (MC SMAG)**

Performs inventory management functions that result in the sale of reparable items to support DoD, federal, and non-federal war fighting weapon systems supply needs. Costs related to providing such inventory (material) support to customers are recouped through the application of stabilized rates that include recovery for cost elements such as oversight/inventory management and cost required to stock, store, receive, and issue such assets.

**MC SMAG Activity Group Composition:**

Marine Corps Inventory Control Point

**Location**

Albany, Georgia

MC SMAG is divided into three Budget Projects to organize their financial operation.

	<u><b>Budget Project</b></u>
<b>Wholesale</b> - Depot Level Repairables	BP84
<b>Retail</b> - Consumable Retail Centrally Managed	BP28
<b>Operations</b> - Cost of Operations	BP91

**Significant Changes since the FY 2023 President's Budget (PB23):**

The FY 2023 obligation authority increase reflect a request of \$800 million above PB23. This request will support procurement of more needed parts that were not put on contract in DON's effort to balance cash solvency in prior fiscal years. Approving this budget request will enable the Navy to buy consumables or repair parts to drive the Maritime Supply Material Availability

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(SMA) to at least 85% availability levels for surface ships, carriers and submarines, as guided by the National Defense Strategy.

The FY 2024 budget request reflects an obligation authority decrease of \$188.7M from FY 2023. This is mainly due to adherence to the 1.0 unit cost ratio (UCR) as well as customers budgeted funding. Additionally, the MC SMAG Retail Centrally Managed (RCM) program ended. There will only be two Budget Projects (BPs.)

**Supply Management Financial Profile:**

	<u>FY2022</u>	<u>FY2023</u>	<u>FY2024</u>
Net Revenue	\$8,506.1	\$9,240.8	\$8,770.1
Expense	<u>\$8,408.3</u>	<u>\$9,501.0</u>	<u>\$8,314.9</u>
Operating Results	\$97.7	(\$260.2)	\$455.2
Less Capital Surcharge	<u>(\$2.0)</u>	<u>\$0.9</u>	<u>\$2.0</u>
Net Operating Results (NOR)	\$95.7	(\$259.3)	\$457.2
Prior Year AOR	(\$328.2)	(\$197.9)	(\$457.2)
Accumulated Operating Results (AOR)	(\$232.5)	(\$457.2)	\$0.0
Other Changes Affecting AOR	\$9.6	(\$34.6)	(\$34.6)
Non-Recoverable AOR	\$0.0	\$0.0	\$0.0
Deferred AOR	\$25.0	\$34.6	\$34.6
AOR for budget purposes	(\$197.9)	(\$457.2)	\$0.0
Direct Appropriation	\$150.0	\$0.0	\$0.0

Note: Amounts may not add due to rounding

**Revenue and Expenses:**

The FY 2022 NAVSUP actual revenue reflected \$219.9 million less from the PB23 estimate. This was mainly driven by lower sales realized from Navy and other Defense Department customers.

Estimated FY 2023 expenses increased from PB23 by \$363.4 million for NAVSUP, driven by an increase in the Cost of Goods Sold (COGS), as a result of higher repair/replacement of aviation materiel than originally planned/budgeted.

FY 2024 NAVSUP revenue decreased from FY 2023, but is more closely aligned to customer budgeted demand. Marine Corps Supply experienced decreases in customer demand due to the Marine Corps' program divestments, logistics support changes for newly fielded systems and delays in revenue from challenges with Defense Agencies Initiative (DAI) implementation.

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**Direct Appropriation:**

The FY 2022 Appropriations Act included a direct appropriation of \$150M to help NAVSUP replenish cash while retaining rate integrity for customers. There are no direct appropriations for FY 2023 and FY 2024.

**NWCF-SM Obligation Authority (\$M):**

	<u>FY2022</u>	<u>FY2023</u>	<u>FY2024</u>
Wholesale	\$5,888.7	\$6,521.3	\$6,294.8
Retail	\$1,016.3	\$1,071.7	\$1,084.6
Operating	\$1,199.3	\$1,273.8	\$1,297.9
Capital Improvement Program (CIP)	\$15.2	\$13.0	\$13.0
Total	\$8,119.5	\$8,879.8	\$8,690.3

Note: Amounts may not add due to rounding

FY 2023 NAVSUP wholesale obligations increased from PB23 controls. Main driver is NAVSUP's \$794.6 million in maritime and aviation contracting efforts to procure/repair items to increase overall Supply Material Availability (SMA).

FY 2024 decrease in requested obligation authority is mainly driven by maintaining a UCR of 1.0.

MC SMAG obligations decreased from PB23 for FY 2023 and FY 2024 due to increasing its repair strategy using a single source Logistics Integrator Support Contract that provides support at a reduced fixed cost.

**NWCF-SM Collections/Disbursements/Net Outlays:**

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
Disbursements	\$7,825.3	\$8,220.8	\$9,047.5
Collections	\$8,405.9	\$8,979.6	\$8,745.8
Transfers-out	\$120.0	\$350.0	\$268.6
Transfer-in	\$411.5	\$0.0	\$0.0
Net Transfer	(\$291.5)	\$350.0	\$268.6
Appropriations	\$150.0	\$0.0	\$0.0
Total Net Outlays	(\$1,022.1)	(\$408.7)	\$570.4

Note: Amounts may not add due to rounding.

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DEPARTMENT OF THE NAVY  
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**NWCF-SM Sales:**

<b><u>Gross Sales (\$M):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Wholesale	\$7,613.3	\$8,356.9	\$7,860.3
Retail	\$1,045.8	\$1,061.0	\$1,083.8
Total	\$8,659.1	\$9,417.9	\$8,944.1

Note: Amounts may not add due to rounding. Gross sales include credits.

**Metrics:**

Metrics provide information on the scope of work performed. Items managed represent the number of active wholesale line items managed. Requisitions received represent incoming customer orders for wholesale material. Receipts represent material delivered from contracts due in or customer returns into the supply system. Issues represent material released to fill customer requisitions received. Contracts executed are awarded documents utilizing Obligation Authority, including both new and modifications to prior awards by procurement and repair.

Overall, metrics reflect minor to moderate changes compared to PB23. Requisitions received and receipts saw decreases in FY22 and FY23 compared to PB23 showing less incoming customer orders and material being delivered from contracts due in. Issues saw a moderate increase in FY22 and FY23 meaning the right materiel are on the shelf to fill customer requisitions.

**NWCF-SM Metrics:**

	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Items Managed	365,812	363,412	363,441
Requisitions Received*	391,640	392,698	392,724
Receipts*	539,133	539,138	539,143
Issues*	379,937	382,405	382,331
Contracts Executed*	33,293	33,305	33,311

Note: \*Document count.

**Undelivered Orders (UDOs) (\$Millions):**

UDOs represent contracts or orders for goods where a liability remains outstanding. Liabilities clear against the NWCF-SM account when material delivers and the vendor receive payments. The accrual of liability creates an outlay requirement. This is accounted for in NWCF-SM cash projections. Long lead-time items continue to contribute to a higher level of UDOs from prior year obligations.

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**NWCF-SM Undelivered Orders (\$M):**

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
UDOs (\$M):	\$8,647.8	\$9,169.6	\$8,817.5

FY 2022 NAVSUP UDOs increased by \$856.6 million from PB23 due to a decrease to disbursements of \$1.1 billion, while obligations decreased by \$232.4 million.

FY 2023 NAVSUP UDO projections increase by \$1.7 billion from PB23 as a result of a \$817.7 million increase in OA requirements mainly from Maritime and Aviation, a larger carryover of \$1.1 billion from FY 2022 UDOs, offset by disbursements increasing by \$216.7 million.

FY 2024 NAVSUP UDO projections decrease by \$346.7 million from FY 2023 due to a \$833 million increase in disbursements, a decrease of \$191.4 million in obligations, and offset by an increase of \$677.6 million in carryover from FY 2023.

**Performance Indicators:** Performance indicators establish the expected level of performance for supply management.

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
Ship Operating Percentage of Time Free of C3/C4 Casualty Reports (CASREPs)			
Deployed	45%	25%	25%
Non-deployed	47%	28%	28%
Aircraft Non-Mission Capable Supply			
Deployed	13%	14%	10%
Non-Deployed	16%	16%	10%
Supply Material Availability	86%	86%	85%
-Nuclear	96%	95%	96%
-Surface Ships	73%	75%	78%
-Carriers and Subs	66%	67%	70%

**Unit Cost (UC):**

The cost per unit sold includes Wholesale, Retail, and Operations obligations divided by Wholesale, Retail, and Operations net sales. Unit cost can change in the year of execution.

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DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - NAVY  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023**

<b><u>Unit Cost</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
NWCF-SM Navy	0.97	0.96	0.99
NWCF-SM MC	0.70	0.87	0.97
<b><u>Composite Rates</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
NWCF-SM Navy Annual Price Change (APC)	8.29%	5.92%	5.32%
NWCF-SM Navy Composite Cost Recovery Rate	20.67%	20.81%	16.94%
NWCF-SM MC Annual Price Change (APC)	-10.40%	21.08%	-8.75%
NWCF-SM MC Composite Cost Recovery Rate	-5.08%	13.22%	4.01%

**Staffing:**

<b><u>NWCF-SM Civilian/Military End Strength &amp; Workyears:</u></b>			
	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Civilian End Strength	5,146	5,218	5,070
Civilian Workyears	5,020	5,206	5,058
Military End Strength	364	364	365

**Civilian and Military Personnel:**

FY 2022 to FY 2023 change of 74 FTE in order to align the workforce with workload. FY 2024 FTE net change from FY 2023 is 148.

Increase of 1 military billet showing in the manpower file for FY 2024.

The Navy Working Capital Fund performed an enterprise-wide review on the cost of doing business with the intent of aligning resources as efficiently as possible. As a result, DON generated \$4.4 million in FY 2024 cost that could be readily diverted to other higher priority and mission essential programs. NAVSUP recognized the following reform initiatives: Federal Employee Compensation Act (FECA) Execution Adjustment reduction of \$141K, \$423K through the FYDP.

**Capital Investment Program (CIP):**

The Capital Investment Program sustains NAVSUP in mission achievement by reinvesting in plant equipment, cranes, information technology (IT), and facilities. FY 2022 was realigned to IT investment for several one-time investments. Increased information technology investment continues to enhance analytical capabilities and inventory accuracy. FY 2023 and FY 2024 decrease reflects completion of FY 2022 one-time investments. MC SMAG does not utilize the CIP.

**NARRATIVE**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**

<b><u>CIP Authority (\$M):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Equipment, Non-ADPE*/Telecom	\$1.44	\$2.00	\$2.00
Equipment, ADPE/Telecom	\$13.65	\$10.00	\$10.00
Software Development	\$0.00	\$1.00	\$1.00
Minor Construction	\$1.06	\$1.00	\$1.00
<b>Total</b>	<b>\$15.20</b>	<b>\$13.00</b>	<b>\$13.00</b>

\*Automatic Data Processing Equipment (ADPE)

## Navy Supply Management - Exhibits

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**CAPITAL INVESTMENT SUMMARY**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

Line #	Description	FY 2022		FY 2023		FY 2024	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
<b>1</b>	<b>Non-ADPE and Telecom Equipment &gt;= \$.250M</b>	<b>0</b>	<b>\$1.440</b>	<b>0</b>	<b>\$2.000</b>	<b>0</b>	<b>\$2.000</b>
	- 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
<b>2</b>	<b>ADPE and Telecom Equipment &gt;= \$.250M</b>	<b>0</b>	<b>\$13.654</b>	<b>0</b>	<b>\$10.000</b>	<b>0</b>	<b>\$10.000</b>
	- 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
<b>3</b>	<b>Software Development &gt;= \$.250M</b>	<b>0</b>	<b>\$0.000</b>	<b>0</b>	<b>\$0.000</b>	<b>0</b>	<b>\$0.000</b>
	- Internally Developed	0	\$0.000	0	\$0.000	0	\$0.000
	- Externally Developed	0	\$0.000	0	\$0.000	0	\$0.000
<b>4</b>	<b>Minor Construction (&gt;= \$.250M and &lt;= \$2.000M)</b>	<b>0</b>	<b>\$0.106</b>	<b>0</b>	<b>\$1.000</b>	<b>0</b>	<b>\$1.000</b>
	- Replacement Capability	0	\$0.000	0	\$0.000	0	\$0.000
	- New Construction	0	\$0.000	0	\$0.000	0	\$0.000
	- Environmental Capability	0	\$0.000	0	\$0.000	0	\$0.000
	<b>Grand Total</b>	<b>0</b>	<b>\$15.200</b>	<b>0</b>	<b>\$13.000</b>	<b>0</b>	<b>\$13.000</b>
	<b>Total Capital Outlays</b>		<b>\$16.467</b>		<b>\$10.220</b>		<b>\$11.000</b>
	<b>Total Capital Investment Recovery</b>		<b>\$12.745</b>		<b>\$13.880</b>		<b>\$15.020</b>

CAPITAL INVESTMENT JUSTIFICATION			FISCAL YEAR (FY) 2024 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)			MARCH 2023						
Department of the Navy/ Supply	#001 - Non-ADPE						Supply Management - Navy		
Non-ADP Equipment	FY 2022			FY 2023			FY 2024		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	0	-	\$0	0	-	\$0	0	-	\$0
Material Handling	0	-	\$0	0	-	\$0	0	-	\$0
Installation Security	0	-	\$0	0	-	\$0	0	-	\$0
Quality Control/ Testing	0	-	\$0	0	-	\$0	0	-	\$0
Medical Equipment	0	-	\$0	0	-	\$0	0	-	\$0
Machinery	0	-	\$0	0	-	\$0	0	-	\$0
Support Equipment	0	-	\$0	0	-	\$0	0	-	\$0
<b>Total</b>	<b>0</b>	<b>-</b>	<b>\$1,440</b>	<b>0</b>	<b>-</b>	<b>\$2,000</b>	<b>0</b>	<b>-</b>	<b>\$2,000</b>

**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. If fully supported, this funding will allow the Navy to develop the right mix of new procurements, resulting in overall requirement reductions, and resolving the problem of trying to maintain old equipment at high maintenance cost and reduced state of readiness. MHE funding limitations in past years has precluded the purchase of required MHE planned for issue. We cannot emphasize enough that this is a continuing program and one year builds on the next. Delaying any funding only postpones the inevitable requirement to procure a new unit at a higher cost. Supply readiness and logistical support are dependent upon the availability of reliable MHE. Non-repairable equipment is not cost effective to maintain for continued operation, and repair parts are difficult to obtain. Replacement of non-repairable equipment with new and more efficient models will reduce excessive 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. For these reasons it is essential to maintain funding to cover procurement of new equipment as required. Naval Supply Systems Command (NAVSUP) is also responsible for replacing and maintaining aging Civil Engineering Support Equipment (CESE) necessary for fuel depot operations throughout the Navy. This equipment is necessary to maintain and improve the working conditions and assist NAVSUP operations employees. Safety, reliability, maintenance cost and customer support are directly impacted by age and condition of this equipment. Economic analysis is not provided since equipment is only replaced as useful life has been exceeded due to age and or usage. Dollar values are established by NAVFAC procuring activity in Port Hueneme, CA. Examples: Tanker truck, 20 ton semi-trailer stake 2 axle, 20 ton semi-trailer van 2 axle.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Department of the Navy/ Supply		#002 - ADPE				Supply Management - Navy			
ADP Equipment	FY 2022			FY 2023			FY 2024		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	0	-	\$0	0	-	\$0	0	-	\$0
Computer Hardware (Network)	0	-	\$0	0	-	\$0	0	-	\$0
Computer Software (Operating System)	0	-	\$0	0	-	\$0	0	-	\$0
Telecommunications	0	-	\$0	0	-	\$0	0	-	\$0
Other Support Equipment	0	-	\$0	0	-	\$0	0	-	\$0
<b>Total</b>	<b>0</b>	<b>-</b>	<b>\$13,654</b>	<b>0</b>	<b>-</b>	<b>\$10,000</b>	<b>0</b>	<b>-</b>	<b>\$10,000</b>

**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 continually upgrading its NETWARCOM approved legacy network, which will replace obsolete non-NMCI ADP equipment to provide an environment for client/server development. A variety of PC hardware platforms currently exists in NAVSUP BSC that prevents deployment of the development tools needed to maintain its competitiveness. Upgrading and standardizing hardware infrastructure will allow NAVSUP BSC to use the network to deploy the latest legacy/non-NMCI software products. As NAVSUP moves forward with reducing system and Information Technology (IT) costs and improving business processes, a critical area identified for analysis is Allowancing. In order to optimize the allowance systems and align with key Enterprise efforts such as Navy ERP and Single Supply Baseline (SSB), NAVSUP continues to streamline 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. Increased execution here reflects increased information technology investment to enhance analytical capabilities and inventory accuracy.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES						
(DOLLARS IN THOUSANDS)				MARCH 2023						
Department of the Navy/ Supply		#004 - Minor Construction				Supply Management - Navy				
		FY 2022		FY 2023			FY 2024			
Minor Construction		Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement		0	-	\$0	0	-	\$0	0	-	\$0
New Construction		0	-	\$0	0	-	\$0	0	-	\$0
Environmental Capability		0	-	\$0	0	-	\$0	0	-	\$0
<b>Total</b>		<b>0</b>	<b>-</b>	<b>\$106</b>	<b>0</b>	<b>-</b>	<b>\$1,000</b>	<b>0</b>	<b>-</b>	<b>\$1,000</b>
<p><b>Justification:</b></p> <p>Minor Construction: NAVSUP, as the maintenance UIC for all facilities occupied and operated by NAVSUP employees, is responsible for Real Property Maintenance (Minor Construction portion) of facilities occupied and operated. These NWCF Supply Management projects are necessary to maintain and improve the working conditions for NAVSUP employees. Projects include Minor Construction requirements of facilities as well as Quality of Life and correction of Safety deficiencies. Minor Construction funding requested supports the overall RPM objectives of the NAVFAC recommended spending limits of between 2% to 4% annually based on the associated property values. Economic analysis are not performed since Minor Construction funding limits keep investment percentage to such a small percentage of the total facility value. Cost savings if identified are provided as part of the project documentation developed. No minor construction project exceeds the current MILCON threshold.</p>										

**CAPITAL BUDGET EXECUTION  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - NAVY  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2022	1	Non ADP		\$2.500	\$1.440	(\$1.060)	Underexecution
			Vehicles	\$0.000	\$0.000	\$0.000	
			Material Handling	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$0.000	\$0.000	
	2	ADP		\$13.000	\$13.654	\$0.654	Emergent-CIP Reprogramming
			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		\$1.000	\$0.106	(\$0.894)	Underexecution
			Replacement	\$0.000	\$0.000	\$0.000	
			New Construction	\$0.000	\$0.000	\$0.000	
			Environmental Capability	\$0.000	\$0.000	\$0.000	
<b>TOTAL FY 2022 CIP Program</b>				<b>\$16.500</b>	<b>\$15.200</b>	<b>(\$1.300)</b>	
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2023	1	Non ADP		\$2.000	\$2.000	\$0.000	
			Vehicles	\$0.000	\$0.000	\$0.000	
			Material Handling	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$0.000	\$0.000	
	2	ADP		\$10.000	\$10.000	\$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		\$1.000	\$1.000	\$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	
<b>TOTAL FY 2023 CIP Program</b>				<b>\$13.000</b>	<b>\$13.000</b>	<b>\$0.000</b>	
FY	L.I.	Category	Capability/Project	I.R	C.P.R	A.C.	Explanation
2024	1	Non ADP		\$2.000	\$2.000	\$0.000	
			Vehicles	\$0.000	\$0.000	\$0.000	
			Material Handling	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$0.000	\$0.000	\$0.000	
			Machinery	\$0.000	\$0.000	\$0.000	
			Support Equipment	\$0.000	\$0.000	\$0.000	
	2	ADP		\$10.000	\$10.000	\$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		\$1.000	\$1.000	\$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	
<b>TOTAL FY 2024 CIP Program</b>				<b>\$13.000</b>	<b>\$13.000</b>	<b>\$0.000</b>	

**SOURCES OF NEW ORDERS & REVENUE  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - NAVY  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
FEBRUARY 2023  
(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
1. New Orders			
a. Orders from DoD Components:	7,841.548	8,409.493	8,730.280
Department of the Navy	7,904.943	8,147.767	8,449.813
O & M, Navy	7,141.104	6,750.624	6,516.678
1A1A	4,349.724	4,250.611	4,077.682
1A2A	879.862	877.328	816.885
1B1B	940.084	1,008.694	990.906
1B4B	861.071	449.584	470.619
Other	110.362	164.407	160.586
O & M, Marine Corps	2.891	3.062	3.225
O & M, Navy Reserve	95.758	101.426	106.823
O & M, Marine Corp Reserve	-	-	-
Reserve Personnel, Navy	-	-	-
Military Personnel, Navy	-	-	-
Military Personnel, Marine Corp	-	-	-
Aircraft Procurement, Navy	13.406	905.330	1,419.746
Weapons Procurement, Navy	20.586	21.805	22.965
Shipbuilding & Conversion, Navy	(7.247)	42.657	44.927
Other Procurement, Navy	21.263	88.088	88.185
Procurement, Marine Corps	0.086	-	-
Research, Dev., Test, & Eval., Navy	0.900	0.953	1.004
National Defense Sealift Fund	-	-	-
Other Navy Appropriations	432.472	40.271	42.414
Other Marine Corps Appropriations	0.991	-	-
Navy Working Capital Fund	182.732	193.550	203.847
Orders from Other DoD Components	(63.395)	261.726	280.467
Department of the Army	(9.463)	24.027	25.305
Department of the Air Force	(62.145)	229.000	246.000
DoD Other	8.213	8.699	9.162
b. Orders from other Fund Activity Groups	-	-	-
Distribution Depots, Navy	-	-	-
Logistics Support, Navy	-	-	-
c. Total DoD	7,841.548	8,409.493	8,730.280
d. Other Orders:	194.282	205.784	216.731
Other Federal Agencies	20.958	22.199	23.380
Trust Fund	-	-	-
Foreign Military Sales	173.324	183.585	193.352
Non Federal Agencies*	-	-	-
Total New Orders	8,035.830	8,615.276	8,947.012
2. Carry-In Orders	1,984.449	2,263.066	2,374.483
3. Total Gross Orders	10,020.279	10,878.342	11,321.495
4. Carry-Out Orders	2,263.066	2,374.483	2,421.754
5. Gross Sales	8,552.976	9,315.789	8,862.081
Reimbursable Orders (BP 91)	109.953	145.988	135.750
6. Credit (-)	(412.900)	(328.900)	(315.527)
7. Net Sales	8,250.029	9,132.877	8,682.304

1) NAVSUP USAF numbers are Net Sales value

2) Gross Sales include Ship Stores BP-21 sales

**REVENUE AND EXPENSES**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**FEBRUARY 2023**  
**(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	8,537.8	9,302.8	8,849.1
Capital Surcharges	2.5	-0.9	-2.0
Capital Investment Recovery except Maj Const	12.7	13.9	15.0
Total Gross Sales	8,703.0	9,315.8	8,862.1
Major Construction Dep	0.0	0.0	0.0
Other Income	110.0	146.0	135.8
Direct Appropriation	150.0	0.0	0.0
Refunds/Discounts (- Credit Sales)	-412.9	-328.9	-315.5
Total Income	8,400.0	9,132.9	8,682.3
Expenses:			
Cost of Materiel Sold from Inventory:			
Navy Managed (920)	6,153.9	7,169.8	5,945.9
DLA Managed (424)	938.1	954.9	974.0
Total Cost of Materiel Sold from Inventory	7,091.9	8,124.7	6,919.9
Salaries and Wages:			
Military Personnel Compensation & Benefits	35.5	36.4	36.1
Civilian Personnel Compensation & Benefits	558.7	604.7	618.0
Travel and Transportation of Personnel	4.6	8.0	8.2
Material & Supplies (Internal Operations)	8.2	21.5	22.0
Equipment	15.7	24.9	25.4
Other Purchases from NWCF	229.2	253.5	258.5
Transportation of Things	115.4	110.3	112.5
Capital Investment Recovery	12.7	13.9	15.0
Printing and Reproduction	0.8	4.4	4.5
Advisory and Assistance Services	51.5	70.8	72.2
Rent, Communication, Utilities & Misc Charges	58.5	76.8	78.4
Other Purchased Services	100.6	45.8	45.3
Total Expenses	8,283.4	9,395.6	8,215.8
Operating Result	116.6	-262.7	466.5
Less Capital Surcharge reservation	-2.0	0.9	2.0
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	114.6	-261.9	468.5
Prior Year AOR	-321.3	-206.6	-468.5
<b>Other Changes Affecting AOR</b>	0.0	0.0	0.0
Accumulated Operating Result	-206.6	-468.5	0.0
Non-Recoverable Adjustments impacting AOR	0.0	0.0	0.0
AOR for budget purposes	-206.6	-468.5	0.0

**SUPPLY MANAGEMENT SUMMARY**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

DIVISION	NET			OPERATING	MOBILIZATION	TOTAL OBLIGATIONS	VARIABILITY TARGET	CAPITAL		
	PEACETIME INVENTORY	CUSTOMER ORDERS	NET SALES					TOTAL	TARGET TOTAL	IMPROVEMENT PROGRAM
<b>BP21</b>										
FY22	15.677	0.000	58.347	69.768	0.000	69.768	0.000	69.768	0.000	0.000
FY23	13.932	0.000	66.271	77.000	0.000	77.000	0.000	77.000	0.000	0.000
FY24	14.835	0.000	69.238	70.000	0.000	70.000	0.000	70.000	0.000	0.000
<b>BP25</b>										
FY22	0.000	0.000	0.000	(1.566)	0.000	(1.566)	0.000	(1.566)	0.000	0.000
<b>BP28</b>										
FY22	2,457.315	987.429	987.429	948.085	0.000	948.085	0.000	948.085	0.000	0.000
FY23	2,521.735	994.696	994.696	994.696	0.000	994.696	35.000	1,029.696	0.000	0.000
FY24	2,586.707	1,014.590	1,014.590	1,014.590	0.000	1,014.590	35.000	1,049.590	0.000	0.000
<b>BP34</b>										
FY22	310.139	239.441	244.865	58.840	0.000	58.840	0.000	58.840	0.000	0.963
FY23	319.473	204.806	203.942	58.388	0.000	58.388	13.000	71.388	0.000	0.030
FY24	304.698	205.821	207.204	54.906	0.000	54.906	13.000	67.906	0.000	0.030
<b>BP81</b>										
FY22	7,674.826	1,510.290	1,401.148	1,374.404	0.000	1,374.404	0.000	1,374.404	0.000	5.299
FY23	8,113.603	1,938.480	2,006.680	1,705.771	0.000	1,705.771	176.000	1,881.771	0.000	10.000
FY24	8,267.716	1,840.056	1,884.455	1,654.616	0.000	1,654.616	176.000	1,830.616	0.000	10.000
<b>BP85</b>										
FY22	32,075.650	5,298.670	5,448.287	4,359.731	0.000	4,359.731	636.000	4,995.731	0.000	406.638
FY23	28,754.829	5,477.295	5,715.300	4,688.921	0.000	4,688.921	636.000	5,324.921	0.000	318.870
FY24	25,427.736	5,886.544	5,371.067	4,515.478	0.000	4,515.478	636.000	5,151.478	0.000	305.497
<b>BP91</b>										
FY22	0.000	0.000	109.953	1,178.285	0.000	1,178.285	0.000	1,178.285	15.200	0.000
FY23	0.000	0.000	145.988	1,257.030	0.000	1,257.030	0.000	1,257.030	13.000	0.000
FY24	0.000	0.000	135.750	1,280.862	0.000	1,280.862	0.000	1,280.862	13.000	0.000
<b>TOTAL</b>										
FY22	42,533.608	8,035.830	8,250.029	7,987.547	0.000	7,987.547	636.000	8,623.547	15.200	412.900
FY23	39,723.573	8,615.277	9,132.877	8,781.806	0.000	8,781.806	860.000	9,641.806	13.000	328.900
FY24	36,601.692	8,947.012	8,682.304	8,590.452	0.000	8,590.452	860.000	9,450.452	13.000	315.527

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 34**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2022**

<u>Weapon System</u>	<u>NMCS</u> <u>Rates</u> <sup>1</sup>	<u>Outfitting</u>	<u>Special</u> <u>Programs</u>	<u>Basic</u> <u>Replen</u>	<u>Total</u>
F/A-18 A-D/ EA-18G	16.8/16.9	5.191	0.000	3.559	8.750
AV-8B / T-45	14.8/19.9	0.000	0.000	0.000	0.000
E-2 / C-2	19.8/12.4	0.120	0.000	0.072	0.192
EA-6B	7.5	0.000	0.000	(0.017)	(0.017)
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000
V-22	22.8	1.464	0.000	2.148	3.612
C-130	23.6	0.222	0.000	(0.221)	0.001
P-3	14.9	0.000	0.000	0.149	0.149
P-8	8.9	0.325	0.000	6.408	6.733
H-1	18.0	0.000	0.000	0.486	0.486
H-53	25.2	2.216	0.000	3.367	5.583
H-60	18.8	1.619	0.000	2.745	4.364
VTUAV	n/a	5.415	0.000	(1.665)	3.750
Common Avionics	n/a	2.895	0.000	5.900	8.795
Aircraft Engines	n/a	0.000	0.000	0.029	0.029
Aviation Support Systems	n/a	0.701	0.000	15.712	16.413
Total		20.168	0.000	38.672	58.840

<sup>1</sup>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. Data Source: NAVAIR Deckplate (Moving Average Status reflecting FY20 Qtr3/April data). Provided by: OPNAV-N43

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 34**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2023**

<u>Weapon System</u>	<u>NMCS Rates<sup>1</sup></u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Total</u>
F/A-18 A-D/ EA-18G	16.8/16.9	1.665	0.000	3.174	4.839
AV-8B / T-45	14.8/19.9	0.000	0.000	0.043	0.043
E-2 / C-2	19.8/12.4	0.660	0.000	0.087	0.747
EA-6B	7.5	0.000	0.000	0.000	0.000
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000
V-22	22.8	1.123	0.000	10.457	11.580
C-130	23.6	0.070	0.000	0.061	0.131
P-3	14.9	0.000	0.000	0.084	0.084
P-8	8.9	1.673	0.000	0.561	2.234
H-1	18.0	0.000	0.000	0.094	0.094
H-53	25.2	27.316	0.000	(7.684)	19.632
H-60	18.8	0.861	0.000	1.775	2.636
VTUAV	n/a	4.262	0.000	1.284	5.546
Common Avionics	n/a	0.655	0.000	3.026	3.681
Aircraft Engines	n/a	0.000	0.000	1.047	1.047
Aviation Support Systems	n/a	0.064	0.000	6.030	6.094
<b>Total</b>		<b>38.349</b>	<b>0.000</b>	<b>20.039</b>	<b>58.388</b>

<sup>1</sup>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. Data Source: NAVAIR Deckplate (Moving Average Status reflecting FY20 Qtr3/April data). Provided by: OPNAV-N43

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 34**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY2024**

<u>Weapon System</u>	<u>NMCS Rates<sup>1</sup></u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Total</u>
F/A-18 A-D/ EA-18G	16.8/16.9	2.520	0.000	2.078	4.598
AV-8B / T-45	14.8/19.9	0.000	0.000	0.028	0.028
E-2 / C-2	19.8/12.4	2.544	0.000	0.057	2.601
EA-6B	7.5	0.000	0.000	0.000	0.000
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000
V-22	22.8	2.247	0.000	4.228	6.475
C-130	23.6	0.017	0.000	0.040	0.057
P-3	14.9	0.000	0.000	0.055	0.055
P-8	8.9	0.000	0.000	0.367	0.367
H-1	18.0	0.000	0.000	0.062	0.062
H-53	25.2	30.084	0.000	0.207	30.291
H-60	18.8	1.575	0.000	0.508	2.083
VTUAV	n/a	2.344	0.000	3.460	5.804
Common Avionics	n/a	0.454	0.000	0.017	0.471
Aircraft Engines	n/a	0.000	0.000	0.031	0.031
Aviation Support Systems	n/a	0.000	0.000	1.983	1.983
<b>Total</b>		<b>41.785</b>	<b>0.000</b>	<b>13.121</b>	<b>54.906</b>

<sup>1</sup>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. Data Source: NAVAIR Deckplate (Moving Average Status reflecting FY20 Qtr3/April data). Provided by: OPNAV-N43

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 85**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2022**

<u>Weapon System</u>	<u>NMCS Rates<sup>1</sup></u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
F/A-18 A-D/ F/A-18 E-G	16.8/16.9	191.684	0.000	(42.760)	730.035	878.959
AV-8B / T-45	14.8/19.9	0.000	0.000	7.653	76.022	83.675
E-2 / C-2	19.8/12.4	33.235	0.000	15.950	104.377	153.562
EA-6B	7.5	0.000	0.000	(0.685)	0.150	(0.535)
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000	0.000
V-22	22.8	56.758	0.000	28.999	551.792	637.549
C-130	23.6	8.602	0.000	0.733	14.653	23.988
P-3	14.9	0.000	0.000	(0.526)	12.934	12.408
P-8	8.9	12.596	0.000	26.247	63.849	102.692
H-1	18.0	0.000	0.000	13.445	184.527	197.972
H-53	25.2	95.288	0.000	(4.620)	350.215	440.883
H-60	18.8	97.053	0.000	3.337	474.568	574.958
VTUAV	n/a	209.954	0.000	(115.281)	9.978	104.651
Common Avionics	n/a	125.923	0.000	(52.680)	164.931	238.174
Aircraft Engines	n/a	0.000	0.000	21.710	711.364	733.074
Aviation Support Systems	n/a	27.521	0.000	30.694	119.506	177.721
Total		858.614	0.000	(67.784)	3,568.901	4,359.731

<sup>1</sup>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. Data Source: NAVAIR Deckplate (Moving Average Status reflecting FY20 Qtr3/April data). Provided by: OPNAV-N43

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 85**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2023**

<u>Weapon System</u>	NMCS <u>Rates</u> <sup>1</sup>	<u>Outfitting</u>	Special <u>Programs</u>	Basic <u>Replen</u>	<u>Repair</u>	<u>Total</u>
F/A-18 A-D/ EA-18G	16.8/16.9	99.930	257.000	(4.077)	970.024	1,322.877
AV-8B / T-45	14.8/19.9	0.000	0.000	(0.017)	85.002	84.985
E-2 / C-2	19.8/12.4	51.274	0.000	(1.311)	100.233	150.196
EA-6B	7.5	0.000	0.000	(0.001)	0.017	0.016
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000	0.000
V-22	22.8	38.607	0.000	29.606	575.614	643.827
C-130	23.6	2.402	0.000	34.826	27.908	65.136
P-3	14.9	0.000	0.000	(0.076)	28.767	28.691
P-8	8.9	57.533	0.000	29.665	41.231	128.429
H-1	18.0	0.000	0.000	7.804	276.998	284.802
H-53	25.2	264.271	0.000	(0.138)	255.236	519.369
H-60	18.8	64.478	0.000	(44.108)	416.574	436.944
VTUAV	n/a	146.521	0.000	(100.093)	20.808	67.236
Common Avionics	n/a	37.160	0.000	(0.404)	98.462	135.218
Aircraft Engines	n/a	0.000	0.000	10.669	638.531	649.200
Aviation Support Systems	n/a	2.518	0.000	29.477	140.000	171.995
Total		764.694	257.000	(8.178)	3,675.405	4,688.921

<sup>1</sup>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. Data Source: NAVAIR Deckplate (Moving Average Status reflecting FY20 Qtr3/April data). Provided by: OPNAV-N43

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 85**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY2024**

<u>Weapon System</u>	<u>NMCS Rates<sup>1</sup></u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Basic Replen</u>	<u>Repair</u>	<u>Total</u>
F/A-18 A-D/ EA-18G	16.8/16.9	139.761	146.700	146.039	867.445	1,299.945
AV-8B / T-45	14.8/19.9	0.000	0.000	0.603	39.550	40.153
E-2 / C-2	19.8/12.4	128.472	0.000	46.964	72.073	247.509
EA-6B	7.5	0.000	0.000	0.018	0.012	0.030
RQ-21 UASI	n/a	0.000	0.000	0.000	0.000	0.000
V-22	22.8	88.193	0.000	14.108	508.091	610.392
C-130	23.6	0.651	0.000	6.217	20.067	26.935
P-3	14.9	0.000	0.000	2.774	20.685	23.459
P-8	8.9	0.000	0.000	12.002	29.648	41.650
H-1	18.0	0.000	0.000	7.011	244.971	251.982
H-53	25.2	253.688	0.000	4.930	233.858	492.476
H-60	18.8	96.030	0.000	3.853	392.779	492.662
VTUAV	n/a	92.013	0.000	3.379	14.962	110.354
Common Avionics	n/a	31.411	0.000	14.471	74.389	120.271
Aircraft Engines	n/a	0.000	0.000	11.859	616.255	628.114
Aviation Support Systems	n/a	0.323	0.000	18.723	110.500	129.546
Total		830.542	146.700	292.951	3,245.285	4,515.478

<sup>1</sup>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. Data Source: NAVAIR Deckplate (Moving Average Status reflecting FY20 Qtr3/April data). Provided by: OPNAV-N43

**OPERATING REQUIREMENTS BY WEAPON SYSTEM**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BP 81**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2022**

<u>Weapon System Name</u>	<u>Basic</u> <u>Replen</u>	<u>Outfitting</u>	<u>Special</u> <u>Programs</u>	<u>Repair</u>	<u>Total</u>
AMPHIBIOUS	19.520	2.245	0.000	11.451	33.216
NUCLEAR	55.209	64.454	0.000	1.916	121.579
SUBSAFE LI/ASDS/DSSP	22.780	0.000	90.903	57.406	171.089
EXPEDITIONARY	7.363	0.000	0.000	6.345	13.708
COMMON ELECTRONIC	92.626	38.559	0.000	65.730	196.915
COMMON HM&E	146.366	0.689	0.000	90.604	237.659
CRUDES	45.645	57.818	0.000	196.086	299.549
LITTORAL	8.867	2.356	0.000	13.083	24.306
SUBMARINE	30.816	3.196	88.973	94.801	217.786
CVN	24.303	2.411	2.293	29.590	58.597
Gross Requirement	453.495	171.728	182.169	567.012	1,374.404

Platform  
 AIRCRAFT CARRIERS  
 AMPHIBIOUS WARFARE  
 COMBAT LOGISTICS SHIPS  
 MINE WARFARE SHIPS  
 SUBMARINES (SSN)  
 SUBMARINES (SSBN)  
 SUBMARINES (SSGN)  
 LITTORAL  
 SURFACE COMBATANTS  
 MISCELLANEOUS  
 ACROSS ALL PLATFORMS

FY22 POTF \*

\* 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.  
 POTF DATA CURRENTLY NOT AVAILABLE

**OPERATING REQUIREMENTS BY WEAPON SYSTEM  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - NAVY  
BP 81  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)  
FY 2023**

<u>Weapon System Name</u>	<u>Basic Replen</u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Repair</u>	<u>Total</u>
AMPHIBIOUS	5.661	2.630	0.000	4.034	12.325
NUCLEAR	48.411	65.149	0.000	7.650	121.210
SUBSAFE LI/ASDS/DSSP	78.849	0.000	136.125	68.310	283.284
EXPEDITIONARY	13.227	0.000	0.000	3.901	17.128
COMMON ELECTRONIC	242.236	39.022	0.000	284.982	566.240
COMMON HM&E	77.114	2.012	0.000	63.317	142.443
CRUDES	41.472	53.181	0.000	156.868	251.521
LITTORAL	10.050	11.349	0.000	9.764	31.163
SUBMARINE	28.399	5.421	155.234	58.933	247.987
CVN	8.058	0.356	0.000	12.571	20.985
CLSSA (COMMON ELECT)	0.000	0.000	11.485	0.000	11.485
Gross Requirement	547.816	179.120	302.844	670.330	1,705.771

Platform  
AIRCRAFT CARRIERS  
AMPHIBIOUS WARFARE  
COMBAT LOGISTICS SHIPS  
MINE WARFARE SHIPS  
SUBMARINES (SSN)  
SUBMARINES (SSBN)  
SUBMARINES (SSGN)  
LITTORAL  
SURFACE COMBATANTS  
MISCELLANEOUS  
  
ACROSS ALL PLATFORMS

FY23 POTF \*

\* 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.  
POTF DATA CURRENTLY NOT AVAILABLE

**OPERATING REQUIREMENTS BY WEAPON SYSTEM  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - NAVY  
BP 81  
FISCAL YEAR (FY) 2023 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)  
FY2024**

<u>Weapon System Name</u>	Basic		Special	<u>Repair</u>	<u>Total</u>
	<u>Replen</u>	<u>Outfitting</u>	<u>Programs</u>		
AMPHIBIOUS	10.380	0.000	0.000	8.449	18.829
NUCLEAR	44.527	69.846	0.000	7.855	122.228
SUBSAFE LI/ASDS/DSSP	49.284	0.000	1.923	93.610	144.817
EXPEDITIONARY	11.356	0.367	0.000	8.218	19.941
COMMON ELECTRONIC	239.498	31.678	0.000	358.140	629.316
COMMON HM&E	74.097	1.574	0.000	71.658	147.329
CRUDES	35.320	48.814	0.000	216.132	300.266
LITTORAL	4.983	18.580	0.000	21.229	44.792
SUBMARINE	40.874	4.814	10.900	95.957	152.545
CVN	12.229	0.526	0.084	46.644	59.483
CLSSA (COMMON ELECT)	0.000	0.000	15.070	0.000	15.070
Gross Requirement	522.548	176.199	27.977	927.892	1,654.616

Platform  
AIRCRAFT CARRIERS  
AMPHIBIOUS WARFARE  
COMBAT LOGISTICS SHIPS  
MINE WARFARE SHIPS  
SUBMARINES (SSN)  
SUBMARINES (SSBN)  
SUBMARINES (SSGN)  
LITTORAL  
SURFACE COMBATANTS  
MISCELLANEOUS  
ACROSS ALL PLATFORMS

FY24 POTF \*

\* 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.  
POTF DATA CURRENTLY NOT AVAILABLE

**INVENTORY STATUS**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BUDGET PROJECT SUMMARY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

FY 2022

	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	40,486.714	0.000	32,178.615	8,308.099
2. BOP INVENTORY ADJUSTMENTS	47.348	0.000	31.935	15.413
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	0.866	(0.866)
B. PRICE CHANGE AMOUNT (memo)	47.348	0.000	31.069	16.279
C. INVENTORY RECLASSIFIED AND REPRICED	40,534.062	0.000	32,210.550	8,323.512
3. RECEIPTS AT STANDARD	9,475.524	0.000	9,393.327	82.197
4. SALES AT STANDARD	8,552.977	0.000	8,552.977	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	1,423.167	0.000	1,178.419	244.748
B. RETURNS FROM CUSTOMERS FOR CREDIT	412.900	0.000	406.311	6.590
C. RETURNS FROM CUSTOMERS, NO CREDIT	5,820.900	0.000	4,718.042	1,102.857
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(784.557)	0.000	(19.716)	(764.841)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(9.749)	0.000	(5.040)	(4.709)
G. OTHER (listed in Section 9)	(5,785.662)	0.000	(4,716.669)	(1,068.993)
H. TOTAL ADJUSTMENTS	1,076.999	0.000	1,561.347	(484.348)
6. INVENTORY EOP	42,533.608	0.000	34,612.246	7,921.361
7. INVENTORY EOP (REVALUED)	0.000	0.000	0.000	0.000
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.000
B. ECONOMIC RETENTION (memo)				0.000
C. CONTINGENCY RETENTION (memo)				0.000
D. POTENTIAL DOD REUTILIZATION (memo)				0.000
8. INVENTORY ON ORDER EOP (memo)	3,976.468	0.000	3,976.468	0.000
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(679.075)	0.000	(370.908)	(308.167)
Strata Transfers	0.000	0.000	845.800	(845.800)
Net/Standard Difference	(5,191.561)	0.000	(5,191.561)	84.974
Total	(5,870.636)	0.000	(4,716.669)	(1,068.993)

**INVENTORY STATUS**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BUDGET PROJECT SUMMARY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2023**

	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	42,533.608	0.000	34,612.246	7,921.361
2. BOP INVENTORY ADJUSTMENTS	49.166	0.000	31.355	17.811
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	0.866	(0.866)
B. PRICE CHANGE AMOUNT (memo)	49.166	0.000	30.489	18.677
C. INVENTORY RECLASSIFIED AND REPRICED	42,582.774	0.000	34,643.601	7,939.172
3. RECEIPTS AT STANDARD	6,419.685	0.000	6,417.442	2.245
4. SALES AT STANDARD	9,315.789	0.000	9,315.789	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	1,254.224	0.000	958.741	295.483
B. RETURNS FROM CUSTOMERS FOR CREDIT	328.900	0.000	321.305	7.595
C. RETURNS FROM CUSTOMERS, NO CREDIT	5,338.303	0.000	4,085.912	1,252.391
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(1,871.898)	0.000	(18.730)	(1,853.168)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	(7.397)	0.000	(5.141)	(2.256)
G. OTHER (listed in Section 9)	(5,005.229)	0.000	(5,090.649)	85.420
H. TOTAL ADJUSTMENTS	36.902	0.000	251.438	(214.535)
6. INVENTORY EOP	39,723.573	0.000	31,996.692	7,726.881
7. INVENTORY EOP (REVALUED)				0.000
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.000
B. ECONOMIC RETENTION (memo)				0.000
C. CONTINGENCY RETENTION (memo)				0.000
D. POTENTIAL DOD REUTILIZATION (memo)				0.000
8. INVENTORY ON ORDER EOP (memo)	3,587.610	0.000	3,587.610	0.000
<b>9. NARRATIVE:</b>				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	72.861	0.000	61.730	11.131
Strata Transfers	0.000	0.000	0.000	0.000
Net/Standard Difference	(5,152.380)	0.000	(5,152.380)	74.289
<b>Total</b>	<b>(5,079.519)</b>	<b>0.000</b>	<b>(5,090.649)</b>	<b>85.420</b>

**INVENTORY STATUS**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - NAVY**  
**BUDGET PROJECT SUMMARY**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**  
**FY 2024**

	Total	Mobilization	---Peacetime--- Operating	Other
1. INVENTORY BOP	39,723.573	0.000	31,996.692	7,726.881
2. BOP INVENTORY ADJUSTMENTS	50.455	0.000	31.985	18.470
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	0.866	(0.866)
B. PRICE CHANGE AMOUNT (memo)	50.455	0.000	31.119	19.336
C. INVENTORY RECLASSIFIED AND REPRICED	39,774.028	0.000	32,028.677	7,745.351
3. RECEIPTS AT STANDARD	5,980.312	0.000	5,978.405	1.907
4. SALES AT STANDARD	8,862.081	0.000	8,862.081	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	993.919	0.000	748.349	245.571
B. RETURNS FROM CUSTOMERS FOR CREDIT	315.527	0.000	308.066	7.461
C. RETURNS FROM CUSTOMERS, NO CREDIT	3,969.417	0.000	3,045.410	924.007
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(1,623.723)	0.000	(15.921)	(1,607.802)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	1.789	0.000	(5.244)	7.033
G. OTHER (listed in Section 9)	(3,947.496)	0.000	(4,052.289)	104.794
H. TOTAL ADJUSTMENTS	(290.567)	0.000	28.370	(318.937)
6. INVENTORY EOP	36,601.692	0.000	29,173.371	7,428.321
7. INVENTORY EOP (REVALUED)	0.000	0.000	0.000	0.000
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.000
B. ECONOMIC RETENTION (memo)				0.000
C. CONTINGENCY RETENTION (memo)				0.000
D. POTENTIAL DOD REUTILIZATION (memo)				0.000
8. INVENTORY ON ORDER EOP (memo)	3,673.986	0.000	3,673.986	0.000
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	92.940	0.000	62.435	30.505
Strata Transfers	0.000	0.000	0.000	0.000
Net/Standard Difference	(4,114.725)	0.000	(4,114.725)	74.289
Total	(4,021.785)	0.000	(4,052.289)	104.794

## Marine Corps Supply Management - Exhibits

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**SOURCES OF NEW ORDERS & REVENUE  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - MARINE CORPS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>
1. New Orders	93.744	96.487	76.581
a. Orders from DoD Components:	93.744	96.487	76.581
Department of the Navy	93.744	96.487	76.581
O & M, Navy	0.085	0.169	0.170
O & M, Marine Corps	93.055	95.121	75.196
O & M, Navy Reserve	0.0	0.0	0.0
O & M, Marine Corp Reserve	0.0	0.0	0.0
Reserve Personnel, Navy	0.0	0.0	0.0
Military Personnel, Navy	0.0	0.0	0.0
Military Personnel, Marine Corp	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	0.0	0.0
Weapons Procurement, Navy	0.0	0.0	0.0
Shipbuilding & Conversion, Navy	0.0	0.0	0.0
Other Procurement, Navy	0.0	0.0	0.0
Procurement, Marine Corps	0.0	0.0	0.0
Research, Dev., Test, & Eval., 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
Navy Working Capital Fund	0.604	1.197	1.215
Orders from Other DoD Components	0.000	0.000	0.000
Department of the Army	0.000	0.000	0.000
Department of the Air Force	0.000	0.000	0.000
DoD Other	0.000	0.000	0.000
b. Orders from other Fund Activity Groups	0.000	0.000	0.000
Distribution Depots, Navy	0.000	0.000	0.000
Logistics Support, Navy	0.0	0.0	0.0
c. Total DoD	93.744	96.487	76.581
d. Other Orders:	0.000	0.000	0.000
Other Federal Agencies	0.000	0.000	0.000
Trust Fund	0.000	0.000	0.000
Foreign Military Sales	0.000	0.000	0.000
Non Federal Agencies*	0.000	0.000	0.000
Total New Orders	93.744	96.487	76.581
2. Carry-In Orders	43.998	27.114	21.000
3. Total Gross Orders	137.742	123.601	97.581
4. Carry-Out Orders	27.114	21.000	15.601
5. Gross Sales	110.628	102.601	81.980
Reimbursable Orders (BP 91)	21.030	17.080	14.636
6. Credit (-)	-0.026	-0.175	-0.175
7. Net Sales	106.055	107.929	87.805

\* Non-federal agencies line includes cash sales

**REVENUE AND EXPENSES**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - MARINE CORPS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
<b>Revenue:</b>			
Gross Sales			
Operations	106.1	102.1	82.0
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery except Maj Const	0.0	0.0	0.0
Total Gross Sales	106.1	102.1	82.0
Major Construction Dep	0.0	0.0	0.0
Other Income	0.0	6.0	6.0
Refunds/Discounts (- Credit Sales)	0.0	-0.2	-0.2
Total Income	106.1	107.9	87.8
<b>Expenses:</b>			
Cost of Materiel Sold from Inventory	103.9	88.3	84.4
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.0	0.0	0.0
Civilian Personnel Compensation & Benefits	2.8	3.6	3.8
Travel and Transportation of Personnel	0.1	0.2	0.2
Material & Supplies (Internal Operations)	0.0	0.0	0.0
Equipment	0.0	0.0	0.0
Other Purchases from NWCFC	5.5	7.2	7.2
Transportation of Things	0.0	0.0	0.0
Capital Investment Recovery	0.0	0.0	0.0
Printing and Reproduction	0.0	0.0	0.0
Advisory and Assistance Services	12.7	6.1	3.5
Rent, Communication, Utilities & Misc Charges	0.0	0.0	0.0
Other Purchased Services	0.0	0.0	0.0
Total Expenses	125.0	105.4	99.1
Operating Result	-18.9	2.5	-11.3
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	-18.9	2.5	-11.3
Prior Year AOR	-7.0	8.7	11.3
Other Changes Affecting AOR	9.6	-34.6	-34.6
Non-Recoverable AOR	0.0	0.0	0.0
Deffered AOR	25.0	34.6	34.6
AOR for budget purposes	8.7	11.3	0.0

**SUPPLY MANAGEMENT SUMMARY**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - MARINE CORPS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

DIVISION	NET	NET	TOTAL			VARIABILITY	TARGET	CAPITAL	CREDIT
	CUSTOMER ORDERS	NET SALES	OPERATING	MOBILIZATION	OBLIGATIONS	TARGET	TOTAL	IMPROVEMENT PROGRAM	SALES
<b>BP28</b>									
FY22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FY23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FY24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>BP84</b>									
FY22	93.744	106.080	95.690	0.000	95.690	0.000	95.664	0.000	-0.026
FY23	96.487	107.929	68.210	0.000	68.210	0.000	68.035	0.000	-0.175
FY24	76.581	87.805	69.830	0.000	69.830	0.000	69.655	0.000	-0.175
<b>BP91</b>									
FY22	0.000	0.000	21.031	0.000	21.031	0.000	21.031	0.000	0.000
FY23	0.000	0.000	16.680	0.000	16.680	0.000	16.680	0.000	0.000
FY24	0.000	0.000	17.060	0.000	17.060	0.000	17.060	0.000	0.000
<b>TOTAL</b>									
FY22	93.744	106.080	116.721	0.000	116.721	0.000	116.695	0.000	-0.026
FY23	96.487	107.929	84.890	0.000	84.890	0.000	84.715	0.000	-0.175
FY24	76.581	87.805	86.890	0.000	86.890	0.000	86.715	0.000	-0.175

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**OPERATING REQUIREMENTS BY WEAPON SYSTEM  
DEPARTMENT OF THE NAVY  
SUPPLY MANAGEMENT - MARINE CORPS  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

<u>Weapon System Name</u>	<b>FY 2022</b>					<u>Total</u>
	<u>NMCRS Rates*</u>	<u>Basic Replen</u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Rework</u>	
COMMUNICATION/SURVEILLANCE	0.5%	55.832	0.000	0.000	52.889	108.721
ORDNANCE TANK AUTOMOTIVE	1.5%	2.814	0.000	0.000	2.352	5.166
GUIDED MISSILES AND EQUIPMENT	0.1%	1.093	0.000	0.000	0.266	1.359
ENGINEER SUPPORT AND CONST	0.0%	1.184	0.000	0.000	0.293	1.477
GENERAL PROPERTY	0.1%	-0.067	0.000	0.000	0.000	-0.067
<b>TOTAL</b>		<b>60.856</b>	<b>0.000</b>	<b>0.000</b>	<b>55.800</b>	<b>116.656</b>

*\*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission*

<u>Weapon System Name</u>	<b>FY 2023</b>					<u>Total</u>
	<u>NMCRS Rates*</u>	<u>Basic Replen</u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Rework</u>	
COMMUNICATION/SURVEILLANCE	0.5%	13.941	0.000	0.000	43.292	57.233
ORDNANCE TANK AUTOMOTIVE	1.5%	2.450	0.000	0.000	10.500	12.950
GUIDED MISSILES AND EQUIPMENT	0.1%	2.358	0.000	0.000	0.275	2.633
ENGINEER SUPPORT AND CONST	0.0%	1.750	0.000	0.000	0.690	2.440
GENERAL PROPERTY	0.1%	1.074	0.000	0.000	8.565	9.639
<b>TOTAL</b>		<b>21.573</b>	<b>0.000</b>	<b>0.000</b>	<b>63.322</b>	<b>84.895</b>

*\*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission*

<u>Weapon System Name</u>	<b>FY 2024</b>					<u>Total</u>
	<u>NMCRS Rates*</u>	<u>Basic Replen</u>	<u>Outfitting</u>	<u>Special Programs</u>	<u>Rework</u>	
COMMUNICATION/SURVEILLANCE	0.5%	19.253	0.000	0.000	43.427	62.680
ORDNANCE TANK AUTOMOTIVE	1.5%	0.854	0.000	0.000	10.500	11.354
GUIDED MISSILES AND EQUIPMENT	0.1%	1.500	0.000	0.000	0.275	1.775
ENGINEER SUPPORT AND CONST	0.0%	0.750	0.000	0.000	0.690	1.440
GENERAL PROPERTY	0.1%	1.074	0.000	0.000	8.565	9.639
<b>TOTAL</b>		<b>23.431</b>	<b>0.000</b>	<b>0.000</b>	<b>63.457</b>	<b>86.888</b>

*\*Not Mission Capable Supply (NMCS) - Percentage of time aircraft are Not Mission Capable due to a supply shortage. Used in conjunction with Not Mission*

**INVENTORY STATUS**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - MARINE CORPS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

FY 2022	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	667.891	13.358	507.597	146.936
2. BOP INVENTORY ADJUSTMENTS	0.000	0.000	0.000	0.000
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	0.000	0.000
B. PRICE CHANGE AMOUNT (memo)	0.000	0.000	0.000	0.000
C. INVENTORY RECLASSIFIED AND REPRICED	667.891	13.358	507.597	146.936
3. RECEIPTS AT STANDARD	49.064	0.981	37.289	10.794
4. SALES AT STANDARD	106.081	2.122	106.081	0.000
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	0.103	0.002	0.078	0.023
B. RETURNS FROM CUSTOMERS FOR CREDIT	0.000	0.000	0.000	0.000
C. RETURNS FROM CUSTOMERS, NO CREDIT	0.673	0.013	0.673	0.148
D. RETURNS TO SUPPLIERS (-)	119.542	2.391	90.852	26.299
E. TRANSFERS TO PROP. DISPOSAL (-)	(71.312)	(1.426)	(54.197)	(15.689)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	2.739	0.055	2.082	0.603
G. OTHER (listed in Section 9)	9.709	0.194	7.379	2.136
H. TOTAL ADJUSTMENTS	61.454	1.229	46.867	13.520
6. INVENTORY EOP	672.328	13.447	485.671	171.250
7. INVENTORY EOP (REVALUED)				
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.000
B. ECONOMIC RETENTION (memo)				0.000
C. CONTINGENCY RETENTION (memo)				0.000
D. POTENTIAL DOD REUTILIZATION (memo)				0.000
8. INVENTORY ON ORDER EOP (memo)		0.000	0.000	0.000
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	9.709	0.194	7.379	2.136
Strata Transfers	0.000	0.000	0.000	0.000
Net/Standard Difference	0.000	0.000	0.000	0.000
Total	9.709	0.194	7.379	2.136

**INVENTORY STATUS**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - MARINE CORPS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

FY 2023	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	672.328	13.447	485.671	171.250
2. BOP INVENTORY ADJUSTMENTS	0.000	0.000	0.000	0.000
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	0.000	0.000
B. PRICE CHANGE AMOUNT (memo)	0.000	0.000	0.000	0.000
C. INVENTORY RECLASSIFIED AND REPRICED	672.328	13.447	485.671	171.250
3. RECEIPTS AT STANDARD	65.136	1.303	49.503	14.330
4. SALES AT STANDARD	107.929	2.159	82.026	23.744
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(0.309)	(0.006)	(0.235)	(0.068)
B. RETURNS FROM CUSTOMERS FOR CREDIT	(80.268)	(1.605)	(61.004)	(17.659)
C. RETURNS FROM CUSTOMERS, NO CREDIT	0.673	0.013	0.511	0.148
D. RETURNS TO SUPPLIERS (-)	0.000	0.000	0.000	0.000
E. TRANSFERS TO PROP. DISPOSAL (-)	(110.000)	(2.200)	(83.600)	(24.200)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	2.739	0.055	2.082	0.603
G. OTHER (listed in Section 9)	9.000	0.180	6.840	1.980
H. TOTAL ADJUSTMENTS	(178.165)	(3.563)	(135.405)	(39.196)
6. INVENTORY EOP	451.370	9.027	317.743	122.639
7. INVENTORY EOP (REVALUED)				
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.000
B. ECONOMIC RETENTION (memo)				0.000
C. CONTINGENCY RETENTION (memo)				0.000
D. POTENTIAL DOD REUTILIZATION (memo)				0.000
8. INVENTORY ON ORDER EOP (memo)				
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	9.000	0.180	6.840	1.980
Strata Transfers	0.000	0.000	0.000	0.000
Net/Standard Difference	0.000	0.000	0.000	0.000
Total	9.000	0.180	6.840	0.000

**INVENTORY STATUS**  
**DEPARTMENT OF THE NAVY**  
**SUPPLY MANAGEMENT - MARINE CORPS**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

FY 2024	---Peacetime---			
	Total	Mobilization	Operating	Other
1. INVENTORY BOP	451.370	9.027	317.743	122.639
2. BOP INVENTORY ADJUSTMENTS	0.000	0.000	0.000	0.000
A. RECLASSIFICATION CHANGE (memo)	0.000	0.000	0.000	0.000
B. PRICE CHANGE AMOUNT (memo)	0.000	0.000	0.000	0.000
C. INVENTORY RECLASSIFIED AND REPRICED	451.370	9.027	317.743	122.639
3. RECEIPTS AT STANDARD	65.136	1.303	49.503	14.330
4. SALES AT STANDARD	87.805	1.756	66.732	19.317
5. INVENTORY ADJUSTMENTS				
A. CAPITALIZATIONS + or (-)	(1.000)	(0.020)	(0.760)	(0.220)
B. RETURNS FROM CUSTOMERS FOR CREDIT	(0.200)	(0.004)	(0.152)	(0.044)
C. RETURNS FROM CUSTOMERS, NO CREDIT	72.800	1.456	55.328	16.016
D. RETURNS TO SUPPLIERS (-)	(24.600)	(0.492)	(18.696)	(5.412)
E. TRANSFERS TO PROP. DISPOSAL (-)	(175.400)	(3.508)	(133.304)	(38.588)
F. ISSUES/RECEIPTS WITHOUT REIMBURSEMENT + or (-)	0.000	0.000	0.000	0.000
G. OTHER (listed in Section 9)	(9.000)	(0.180)	(6.840)	(1.980)
H. TOTAL ADJUSTMENTS	(137.400)	(2.748)	(104.424)	(30.228)
6. INVENTORY EOP	466.911	9.338	329.554	126.058
7. INVENTORY EOP (REVALUED)				
A. APPROVED ACQUISITION OBJECTIVE (memo)				0.000
B. ECONOMIC RETENTION (memo)				51.500
C. CONTINGENCY RETENTION (memo)				86.600
D. POTENTIAL DOD REUTILIZATION (memo)				0.000
8. INVENTORY ON ORDER EOP (memo)				0.000
9. NARRATIVE:				
Other adjustments (Total posted to line 5g):				
Other Gains/Losses	(9.000)	(0.180)	(6.840)	(1.980)
Strata Transfers	0.000	0.000	0.000	0.000
Net/Standard Difference	0.000	0.000	0.000	0.000
Total	(9.000)	(0.180)	(6.840)	0.000

### 3. Research & Development

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**Mission Statement and Overview:**

The Navy Working Capital Fund's (NWCF) Research and Development (R&D) business provides research, development, test, evaluation, integration, and engineering services to its customers. The R&D business includes five Naval Warfare Centers and the Naval Research Laboratory and provides expertise in land, air, sea, space, and information warfare domains. Each R&D activity makes major contributions to lethality and readiness within the Department of Navy (DON) and Department of Defense (DOD) with contributions in areas like battle-space awareness, net-centric operations (connectivity and interoperability), cyber warfighting capability, test and evaluation of Major Defense Acquisition Programs (MDAPs), and battle management systems. Continued success by our Warfare Centers and Laboratories is vital to maintaining and improving upon the mission capabilities of the operating forces that sustain our global presence.

- Naval Information Warfare Center (NIWC) develops, delivers and sustains communications and information warfare capabilities for warfighters, keeping them securely connected anytime, anywhere and rapidly delivers cyber warfighting capability from seabed to space.
- Naval Air Warfare Center (NAWC) provides R&D, engineering, test and evaluation of all Navy and Marine Corps aircraft, aircraft systems, weapons and weapon systems.
- Naval Surface Warfare Center (NSWC) cohesively and seamlessly operates the Navy's full spectrum research, development, test and evaluation, engineering, and fleet support centers for offensive and defensive systems associated with surface warfare and related areas of joint, homeland, and national defense systems from the sea.
- Naval Undersea Warfare Center (NUWC) operates 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 (USW) and related areas of homeland security and national defense.
- Naval Research Laboratory (NRL) operates as the Navy's full-spectrum corporate laboratory, conducting a broadly based multidisciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems and ocean, atmospheric, and space sciences and related technologies.
- Naval Facilities Engineering and Expeditionary Warfare Center (EXWC) operates Navy's research, development, test and evaluation for support combatant capabilities and sustainable facilities through specialized engineering, technology development, and lifecycle logistics services.

**Significant Changes since the FY 2023 President's Budget:**

The R&D rate includes an increase of \$171.1 million (1.01%) in Naval Innovative Science and Engineering (NISE) funding. The Department of Navy increased NISE funding from 2% to 3% of budgeted orders in FY 2024 to increase investment in science and technology, basic and

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applied research, workforce development, and lab revitalization across the laboratories pursuant to the authorities granted to the Department of Defense in Title 10 US Code 4123.

FY 2024 rates for NIWC, NSWC, and NUWC include a \$304.6 million (1.67%) increase in revenue to improve cash balances. Each activity impacted deferred the corresponding increase to NOR in order to retain this cash in future rate setting cycles.

The R&D rate for FY 2024 include a reduction of \$1.3 million for Federal Employee Compensation Act (FECA).

Although inflation (\$8.4M) and fuel pricing (\$16.2M) also increased the R&D rate for FY24, Civilian Pay Raise Assumptions increased rates by \$217.2M.

**Financial Profile:**

<b><u>Orders/Revenue/Expense/Operating Results (\$Millions):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Orders	\$17,450.1	\$18,216.6	\$18,935.2
Revenue	\$17,202.6	\$18,033.9	\$19,138.2
Expense	<u>\$17,086.2</u>	<u>\$18,151.8</u>	<u>\$18,852.4</u>
Operating Results	\$116.9	(\$117.9)	\$285.8
Capital Surcharge	(\$49.2)	(\$25.0)	(\$46.0)
Budgetary Transfers	\$0.4	\$0.0	\$0.0
Prior Year Adjustments	(\$2.8)	\$0.0	\$0.0
Asset Adjustment	<u>(\$1.9)</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)	(\$63.5)	(\$142.9)	\$239.8
Prior Year AOR	\$158.2	\$207.8	\$64.8
Deferred Adjustments impacting AOR	\$0.0	\$0.0	(\$304.6)
Accumulated Operating Results (AOR)	\$209.7	\$64.8	\$0.0

**Orders, Revenue, and Expense:**

Changes in orders from FY 2022 to FY 2023 are based on updated new order estimates as coordinated with customers. Increases in expenses are a result of inflation, pricing, and adjustments in overhead to include the NISE increase. Revenue is set to achieve zero AOR in FY 2024.

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<b><u>Disbursements/Collections/Outlays (\$Millions):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Disbursements	\$17,364.5	\$18,021.8	\$18,717.4
Collections	\$ 17,327.6	\$17,645.7	\$18,842.3
Net Outlays	(\$37.0)	(\$376.1)	\$124.9

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

**Workload:**

<b><u>Direct Labor Hours (000):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Current Estimate	76,802	78,039	78,143

**Direct Labor Hours (DLHs):**

R&D continues to size workload to support the customer's demand in the following programs: Fleet Readiness Directorate Installation Office, Data Center Atlantic, Cyber Security Service Provider, Weapon Systems, Ship and Submarine Design and Integration, Surface Systems, Army, Air Forced and USCG programs.

**Performance Indicators:**

	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Total Stabilized Cost (\$Millions)	\$9,294	\$9,728	\$10,262
Workload (DLHs) (000)	72,835	74,220	74,279
Unit cost (per DLH)	\$127.60	\$131.07	\$138.16

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. Unit costs reflect stabilized costs per associated stabilized hours as an expense rate.

<b><u>Stabilized / Composite Rates:</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Stabilized Rate	\$127.60	\$131.07	\$138.16
Change from Prior Year		2.72%	5.41%

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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. The composite rate change incorporates both the stabilized costs and the reimbursable costs. The composite rate change in FY 2024 reflects adjustments to direct workload, pricing changes, and increases in NISE funding to comply with 10 USC 4123.

**Staffing:**

<b><u>Civilian/Military ES &amp; Work Years:</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Civilian End Strength	59,004	59,108	59,090
Civilian Workyears (Strength time)(CIVMAR)	16,056	15,109	15,088
Civilian Workyears (Strength time)	58,278	58,231	58,213
Military End Strength	582	546	571
Military Workyears	400	507	533

**Civilian and Military Personnel:**

Civilian strength levels, measured by both end strength and full-time equivalents (FTEs) have stabilized due to overhead indirect workforce reduction reform initiatives aligning with DON's overall effort to reduce/stabilize civilian labor and invest in programs to increase readiness and lethality.

<b><u>Capital Investment Program (CIP) Authority (\$Millions):</u></b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>
Equipment, Non-ADP / Telecom	\$63.8	\$69.2	\$63.5
Equipment, ADPE / Telecom	\$31.4	\$23.8	\$34.5
Software Development	\$3.1	\$0.0	\$2.1
Minor Construction	<u>\$99.2</u>	<u>\$106.4</u>	<u>\$132.3</u>
Total	\$197.6	\$199.4	\$232.5

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, software, and minor construction. Minor construction includes projects meeting the criteria of the Defense Laboratory Revitalization Program (DLRP).

**CHANGES IN THE COSTS OF OPERATIONS  
DEPARTMENT OF THE NAVY  
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(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY22 Actuals	17,085.7
FY23 President's Budget:	18,198.1
Estimated Impact in FY23 of FY22 Experience:	-115.9
Pricing Adjustments:	168.5
Civilian Personnel	140.0
Fuel Price	28.6
Program Changes:	-55.8
Other Changes:	-43.1
FY 2023 Current Estimate:	18,151.7
Pricing Adjustments:	576.7
Annualization of Prior Year Pay Raises	100.2
Civilian Personnel	99.8
Military Personnel	0.4
FY 2024 Pay Raise	273.5
Civilian Personnel	272.4
Military Personnel	1.1
Fuel Price Changes	-7.4
General Purchase Inflation	26.4
Other	184.0
Productivity Initiatives and Other Efficiencies:	-34.1
Program Changes:	-4.2
Other Changes:	162.3
FY 2024 Estimate:	18,852.5

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CAPITAL INVESTMENT SUMMARY  
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(DOLLARS IN MILLIONS)

Line #	Description	FY 2022		FY 2023		FY 2024	
		Quantity	Total Cost	Quantity	Total Cost	Quantity	Total Cost
1	<b>Non-ADPE and Telecom Equipment &gt;= \$.500M</b>	51	\$63.811	53	\$69.204	42	\$63.489
	- Vehicles	1	\$1.200	0	\$0.000	0	\$0.000
	- Material Handling	1	\$0.624	3	\$3.200	1	\$0.600
	- Installation Security	0	\$0.000	0	\$0.000	0	\$0.000
	- Quality Control/Testing	17	\$23.017	18	\$21.003	18	\$27.567
	- Medical Equipment	0	\$0.000	0	\$0.000	0	\$0.000
	- Machinery	2	\$2.644	3	\$2.456	1	\$0.900
	- Support Equipment	30	\$36.326	29	\$42.545	22	\$34.422
2	<b>ADPE and Telecom Equipment &gt;= \$.500M</b>	26	\$31.446	21	\$23.779	15	\$34.531
	- Computer Hardware (Production)	8	\$10.662	6	\$7.909	3	\$10.719
	- Computer Hardware (Network)	9	\$10.055	7	\$9.500	9	\$18.415
	- Computer Software (Operating)	0	\$0.000	0	\$0.000	0	\$0.000
	- Telecommunications	5	\$4.605	2	\$1.189	0	\$0.000
	- Other Support Equipment	4	\$6.124	6	\$5.181	3	\$5.397
3	<b>Software Development &gt;= \$.500M</b>	2	\$3.055	0	\$0.000	3	\$2.103
	- Internally Developed	0	\$0.000	0	\$0.000	2	\$1.108
	- Externally Developed	2	\$3.055	0	\$0.000	1	\$0.995
4	<b>Minor Construction (&gt;= \$.500M and &lt;= \$2.000M)</b>	45	\$99.238	39	\$106.437	54	\$132.339
	- Replacement Capability	8	\$24.171	13	\$32.875	13	\$33.159
	- New Construction	36	\$72.217	26	\$73.562	41	\$99.180
	- Environmental Capability	1	\$2.850	0	\$0.000	0	\$0.000
	<b>Grand Total</b>	124	\$197.550	112.508	\$199.420	114	\$232.462
	<b>Total Capital Outlays</b>		\$152.728		\$170.188		\$182.930
	<b>Total Capital Investment Recovery</b>		\$103.849		\$178.972		\$192.567

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Department of the Navy/ Research and Development		#001 - Non-ADPE				Research and Development			
Non-ADP Equipment	FY 2022			FY 2023			FY 2024		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Vehicles	1	1,200	\$1,200	0	0	\$0	0	0	\$0
Material Handling	1	624	\$624	3	1,067	\$3,200	1	600	\$600
Installation Security	0	0	\$0	0	0	\$0	0	-	\$0
Quality Control/ Testing	17	1,354	\$23,196	18	1,167	\$21,003	18	1,532	\$27,567
Medical Equipment	0	-	\$0	0	0	\$0	0	0	\$0
Machinery	2	1,322	\$2,644	3	819	\$2,456	1	900	\$900
Support Equipment	30	1,211	\$36,326	29	1,467	\$42,545	22	1,565	\$34,422
<b>Total</b>	<b>51</b>	<b>1,251</b>	<b>\$63,811</b>	<b>53</b>	<b>1,306</b>	<b>\$69,204</b>	<b>42</b>	<b>1,512</b>	<b>\$63,489</b>
<b>Justification:</b>									
<p>These Non-ADP investments fund the acquisition of mission essential equipment that support research and development, test and evaluation of current and newly developed projects in research and development. 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, quality control testing in support of diagnostic analysis, fault identification, failure analysis, testing and calibration for technical components. 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, range craft, material depot, and range systems.</p>									
<b><u>PROJECTS OVER \$1M</u></b>									
<p>FY22 "Low Earth Orbit (LEO) Flight Simulator ", "New High High-Power Radiofrequency (HPRF) Test Capability for Emerging Threat Assessment ", "High-Power Wideband Amplifier for Threat-Agnostic Waveform Development ", "Humanoid Robots for Interaction", "Science-Grade VNIR/SWIR HIS Sensor," (NRL)- The testbed will include both laboratory and commercial grade 5G networks to enable Electronic Warfare (EW) and Cyber operations researchers to develop appropriate countermeasures to the use of 5G networks by our adversaries. While the sensor is a science-grade imager that is essential for indicating properties of the underlying soil of vegetation-covered terrain. The "Low Earth Orbit (LEO) Flight Simulator" will include artificial intelligence training facility for aerospace applications that will advance research efforts across a number of disciplines, including Space Technology, Optical Sciences, Remote Sensing, and applied research in Artificial Intelligence. Target applications include those solving alternate position, navigation, and timing solutions for Global positioning satellite (GPS) denied environments, and low-latency threat tracking algorithms.</p>									

**FY22 OceanServer Iver 4- \$1,200K (NSWC Panama City; Panama City, FL)** - Procure and check out a system of OceanServer Iver 4; Iver 4 is necessary to support S&T for advanced sensors and autonomous behavior development, manned and unmanned interoperability, as well as plug and play autonomy architectures. The payback period for this investment is 1.6 years.

**FY22 HEL Source-100kW- \$2,500K (NSWC Dahlgren; Dahlgren, VA)** - The Navy LWS lethality team has an ever-increasing demand signal to support multiple lethality programs and projects to align with current Navy Increment 2 and 3 (area/point defense) goals. Threats are becoming more advanced and as such, the Navy needs to increase its capability when addressing these threats. With higher power LWS (and sources) under development, the Navy lethality team must be capable of testing at representative parameters to provide high fidelity products for system capabilities and effectiveness analyses. This increase in capability will position the Navy to stay in front of adversarial threat evaluation as it relates to LWS performance and keep NSWCDD at the forefront of DoD LWS lethality. The payback period for this investment is 4.6 years.

**FY22 Vibration Shaker System – \$1,643K (NSWC Indian Head; Indian Head, MD)** – This project consists of procurement of two electrodynamic vibration shakers which applies highly accurate dynamic vibration input levels to a wide variety of US Navy containers. This system will replace an existing system which is outdated. The existing system was delivered in 1993 and will be 28 years old in 2021. This project supports vibration testing of ordnance and non-ordnance containers. The payback period for this investment is 3 years.

**FY22 Hydrospace Lab Large Test Chamber- \$1,100K (NSWC Panama City; Panama City, FL)** – 1 - 60" ID x 10' Long Hyperbaric Chamber for testing and evaluation of unmanned diving and life support equipment. To alleviate issues related to an increase in testing, a new chamber is required. This chamber will serve a dual purpose as it will be engineered to work with exotic gas mixtures that are soon to be a requirement in unmanned hyperbaric testing. The payback period for this investment is 1.9 years.

**FY22 NEWEG- \$1,145K (NSWC Crane; Crane, IN)** – Procure 20GHz 4 port RF Generator to interface to incoming NEWEG high fidelity simulator. Procurement enables wideband/high pulse density integrated Amplitude, Phase, Doppler and Time Difference Angle of Arrival (AoA) for RF simulations. NEWEG will be used with existing Next Generation Threat System (NGTS) located in B3330S to apply RF signals from entities in 3D space allowing for analysis of countermeasure and maneuver tactics on threat/target. The payback period for this investment is 4.1 years.

**FY22 B1560 Generator- \$1,300K (NSWC Dahlgren; Dahlgren, VA)** – Existing 32-year old generator has been unreliable and is in need of maintenance. Generator supplies backup power for B1560 that supports all SLBM program labs, systems, networks and data for all classifications, allowing for continuous developer/tests/analyst/fleet media creation use for up to 300+ users as well as the SSP COOP/EAL. This effort will increase the confidence in the reliability of the generator by performing a significant modification of the needed components, allowing for a continued useful life of about 10+ years. Previous analysis conducted with NAVFAC considering different options. The payback period for this investment is 5.1 years.

**FY22 150 Gallon Vertical Mixer Controls Upgrade- \$1,314K (NSWC Indian Head; Indian Head, Maryland)** - After 26 years of service the current control system has reached the end of its useful life and is unsupported by its manufacturer. Project will modernize and re-vitalize the 150 Gallon Vertical Mixing facility with state-of-the-art PLC control system, high def. camera system, Safety Manual compliant oven. The payback period for this investment is ~1 year.

**FY22 CTR Equipment Suite- \$1,145K (NSWC Panama City; Panama City, FL)** – Upgrading and replacing critical test range equipment that is outdated and, in most cases, out of service. Effort revitalizes test range capabilities. 1 - Klein 5900 Side Scan Sonar, 2 - Castaway Conductivity, Temperature, and Depth (CTDs), 2 - PRR2600 profiling reflectance radiometers, 1 - Datawell buoy, 2 - Acoustic Doppler Current Profilers (ADCP), 2 - Seabird CTDs. The payback period for this investment is 6.6 years.

**FY22 Real Time Modeling & Simulation & Power Hardware-in-the-Loop Emulation of Shipboard Power System & Mission Load Risk Mitigation Test & Evaluation – \$1,165k (NSWC Philadelphia; Philadelphia, PA)** – For this investment a Real Time Electric Plant Stimulator for Shipboard Electric Plant Management and Control System (EPMCS) testing and evaluation will be procured and constructed. It will provide the capability to test electric plant and auxiliary systems as a total electric power system environment by stimulating the electric plant management and controller in order to mitigate risk and reduce testing costs through modelling and hardware stimulation technique to align platform electric power

systems and mission systems developments, connection to PEDAL and to enable capability. Without the Real Time Electric Plant Stimulator the Navy will have to rely on engineering and design compatibility issues to be tested on ships delivered to the fleet. The payback period for this investment is ~3 years.

**FY22 Survivability Cooling Tower - \$1,720K (NUWC Newport)** – Procure and integrate a refrigeration based chilled water system in Building 114 to replace the Evaporative Tower and Storage Tank currently servicing B-114. The evaporative system currently installed can no longer provide the necessary cooling requirements and a refrigeration based chilled water system will allow for vibration testing and environmental temperature testing year round.

**FY22 Electro-Dynamic Shaker - \$1,140K (NUWC Newport)** – Procure and integrate an Unholtz Dickie T2000 electro-dynamic Shaker to replace a 37-year old Ling V984 vibration table that has reached end of life. The Unholtz Dickie T2000 shaker will allow DIVNPT to support current and future submarine class vibratory testing at the same time and will ensure an uninterrupted test capability.

**FY22 Modular Facility - \$1,490K (NUWC Newport)** - Procure and install interlocking and stackable units to create a two-story, modular facility for additional production space.

**FY22 OVEN UPGRADES AT BLDG 14507 (NAWC)** - The Navy requires new weapons with modern explosives and propellants. Newer solid energetic materials require research, development, and testing which means that these materials need to be cured and conditioned in appropriate ovens once processed. D556100 is approaching the breaking point of not being able to accomplish work because there isn't enough curing and conditioning ovens. However, the Navy is still ramping up the amount of RDT&E and aging work they need to execute its mission.

**FY22 FOTS\_PT MUGU BACKBONE WEST (NAWC)** - This effort will replace the current core data network at NAWCWD Point Mugu. The current network does not adequately support current demand, technologies, and repairs are difficult due to age. This effort will significantly increase the usable bandwidth and allow for timely repairs as needed. The Point Mugu Cable plant currently supports all NAWCWD RDT&E Labs and Range connectivity on and off station, as well as data transport for phone, alarm, and VTC across the site. If the project is not funded an irreparable and catastrophic communications failure could occur at any time due to the age of the cable and the fact that it has become brittle and fragile. Several portions of the cable plant have no spare fibers and additional services cannot be offered. Many new high bandwidth communications devices do not function properly or function at a significantly lower bandwidth due to the age of the existing fiber optic system and its splices. This limits the ability to provide high bandwidth video and data communications. Even if the current fiber optic cable does not fail, warfighter initiatives will experience unreasonable latency.

**FY22 LASER TEST CAPABILITY AT WSL (NAWC)** - Laser threat systems test capability needed for WSL Mission to conduct vulnerability and Title 10 LFT&E against emerging threats. Acquisition programs are analyzing the effects of DE systems but limited test data is available to aid validating these assessments. This project will purchase and integrate a 50KW portable laser system into the WSL facility to support the five WSL test sites. (Existing power and controls are in place that will facilitate this installation). This project will also purchase instrumentation for threat characterization, provide familiarization with the laser systems, and conduct characterization tests to demonstrate capability

**FY22 COMMUNICATION & RESEARCH SYSTEM (CRS) MODERNIZATION (NAWC)** - Corporate Customer Support Department is at risk of not being able to provide tools necessary to support NAWCWD requirements, and ultimately the warfighter. It will also cause major work stoppage, unnecessary use of resources to try to maintain an outdated system/equipment, and an increased IT security risk. This effort will increase productivity and capabilities by replacing outdated equipment with the current advancements in technology. In addition, we are acquiring equipment that allows us to innovate and drive future improvements to the products and services we provide as a department.

**FY22 RDT&E HEADEND CYBERSECURITY STACK (NAWC)** - Head-end cybersecurity stack of the RDT&E classified and unclassified networks will require replacement/upgrade starting in FY22. WD/RDT&E customers and the Navy rely on us to protect the confidentiality and integrity of the NAWCWD data, systems, and networks and to ensure needed assets are available whenever called upon. Industry best practice is to replace the primary systems/components of enterprise headend security stacks to keep up with improvements in performance, security architectures as well as new innovative capabilities. Security, performance, total-cost-of-ownership, and productivity are the primary reasons for implementing a 5-year upgrade cycle.

**FY22 HIGH-THROUGHPUT & CHARACTERIZATION LAB EQUIPMENT (NAWC)** - This effort integrates six instruments integral to maintaining and supporting active research projects, enabling future opportunities, and providing necessary support across a variety of DoD customers. These projects include novel energetics, advances in fuels from renewable sources and for hypersonic and new materials. Non-selection of this proposal will limit the productivity of our staff, decrease the number of innovative fuels, energetics, and propellants, hinder patent generation in FY23 and beyond, and decrease the speed to which these advances reach the fleet.

**FY22 SAIL CARRIER C4I SUITE (NAWC)** - The Surface/Aviation Interoperability Laboratory (SAIL) facility provides programs with an up front and early exposure to deployed naval systems and capabilities that provide risk reduction and cost efficiency for customers. With the increasing of DOD and DON PED (processing, exploitation, and dissemination), voice, video, data communications requirements, and intelligence, surveillance, and reconnaissance (ISR) data to be available to the fleet, the need to validate an ISR platform's interoperability with PED and communication systems has drastically increased. SAIL has been tasked to provide shipboard representative Command, Control, Communications, Computers, and Intelligence (C4I) to support interoperability of Naval Aviation Enterprise (NAE) and the Carrier Strike Group. This includes all network connectivity within the C4I Suite on the ship, ISR, and targeting data provided to combat systems for weapons deployment. The current SAIL C4I suite is facing obsolescence, due to current IA requirements and age, and is not able to fulfill the current Fleet requirements. This project will procure an upgraded SAIL C4I suite to support testing interoperability during Developmental test, and during their respective air platform life cycle. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY22 ATLANTIC TEST RANGE (ATR) C-BAND DUAL-POL DOPPLER WEATHER RADAR (NAWC)** - NAWCAD performs open air flight testing in support of Naval Aviation Enterprise (NAE) mission and Navy requirements. Flight testing is highly dependent on 'good weather' as optical and sensor packages must stay dry to function and aircraft are not allowed to fly through clouds (visibility). NAWCAD current subscribes to web based services which significantly limits analysis and is unable to provide fine resolution weather assessments. This results in the inability to make weather-based in-flight deviations or make "fly through" or "go around" decisions. This project will procure a weather radar which will support flight planning and early identification of weather issues that require mitigation. Weather range coverage will increase and provide the ability to detect low-level wind shear and characterize storm cells as strengthening and/or weakening. Increased flight safety will also result. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY22 EPSEF WALK-IN ENVIRONMENTAL CHAMBER (NAWC)** - The NAWCAD Electrical Power Systems Evaluation Facility (EPSEF) supports the Navy in qualifying and troubleshooting avionics, power, and mission system contract requirements and fleet evaluations. EPSEF uses a walk-in environmental chamber that provides temperature, altitude, conditioned blast air and rotary drive capabilities. The existing walk-in chamber is over 50 years old and many of the parts required for maintenance and repair are obsolete. In an effort to support current and upcoming test programs, the chamber will be replaced with modern capabilities including humidity environment and a larger volume (required to adequately test PODs and small UAVs). Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY22 ADVANCED TRANSDUCER ENGINEERING FACILITY (ATEF) (NAWC)** - A gap exists in NAWCAD's infrastructure to research and develop transducers for airborne Anti-Submarine Warfare (ASW) sensors that can support the ASW Kill Chain against a formidable submarine threat. This project will procure equipment that will enhance ATEF and support research, design, development, prototyping and testing of the next generation of undersea warfare transducers for use in the airborne ASW) mission. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY22 ORGANIC PRODUCT DEVELOPMENT PAINT BOOTH (NAWC)** - NAWCAD has a requirement for a paint booth to support rapid engineering and production capability for NAWCAD mission. The existing paint booth is nearing obsolescence, has safety liabilities, and does not meet current OSHA standards. This project will procure a new, replacement paint booth. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY22 LEASED RELOCATABLE (LR) 4010 ACQUISITION (NAWC)** - This project will buy a trailer that is currently being leased, and will provide mission space for NAWCAD mission. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY23 Strontium Optical Clock Core (NRL)** – This project is an advanced in clocks, in particular optical clocks, which have demonstrated in laboratory experiments orders of magnitude improvement over microwave clocks utilized in previous systems. Optical clocks of this newfound precision will not only be useful in decreasing the vulnerability of current systems, but entirely new applications of precise time and frequency will become possible.

**FY23 Humanoid Robot for Interaction (NRL)** - A project that framework specifically calls out human-machine teaming. The desirable capabilities and features for mobile robotics platforms, including multiple methods of transportation (kneeling/rolling and walking), manipulation, perception, navigation, and upgradable sensors, computers and batteries.

**FY23 Remote Sensing Coastal Buoy System, SEM with Advanced Diffraction Capabilities, Confocal Spectroscopic Imaging System (NRL)** – These are some of the largest investments in FY 2023 all of which cost more than one million dollars.

**FY23 Field Emission Transmission Electron Microscope (TEM) (NRL)** - Demand for analytical TEM instrument time from NRL users requires a dedicated instrument (40+hrs per week), and thus cannot be met at any of the local user facilities, i.e., National Institute for Standards and Technology in Gaithersburg, or the University of Maryland. Use of outside commercial services for TEM work would both reduce the timeliness, and quality of the research results.

**FY23 Electronic Attack Technique Development Bench System (NRL)** – This project allows the Tactical Electronic Warfare Division to research, develop, evaluate, and test complex Electronic Attack (EA) techniques against modern radar and seeker threats faced by US Navy surface platforms. Modern threats required coordinated responses between multiple on-board and off-board EW systems; this system complements other investments to support system-of-systems evaluation and testing. The system will support testing of program-of-record and developmental systems, including future LEED payloads, and research and developmental systems.

**FY23 Uninterrupted Power Supply (UPS) for Laboratory Equipment (NIWC)** – This project in the support equipment capability will provide an alternate power source to protect test equipment allowing a graceful shutdown in the event of a power outage. An economic analysis has been performed. Without this investment, there is a risk of the failure of valuable laboratory test equipment.

**FY23 RDT&E HEADEND COMMUNICATION STACK-UPGRADE (NAWC)** - DITAC's six networks include two unclassified (DREN) and four classified RDT&E networks (SDREN and SIPR) that operate at China Lake and Pt Mugu. Industry best practice is to replace the primary systems/components of enterprise headend network communication stacks to keep up with improvements in performance, security as well as new innovative capabilities. Primary reasons for implementing include but are not limited to the following: Security, Performance, Life-cycle Total Cost of Ownership (TCO), & Productivity.

**FY23 DIGITAL TWIN INFRASTRUCTURE (NAWC)** - This project is to procure and setup a digital twin infrastructure for shared usage by customers. Digital Twin potential for shorter design development timeline and reduced risk in digital algorithm development prior to CDR could be achieved by starting digital firmware/software development and validation in a representative digital environment much earlier than could be achieved in a traditional "heel to toe" program constrained by long lead and target hardware build timelines. Currently software and detailed algorithm development usually cannot happen until hardware is locked down as well as throughput limitations based on hardware stability. This infrastructure has the ability to reduce 20% of a programs schedule, thereby also reducing cost. Additionally, it is much cheaper to have multiple iterations of the digital twin to use in various environments that require high fidelity representation but not the actual hardware; ex. trainers, flight simulators, and modeling environments.

**FY23 WEAPON GPS NAVIGATION RDT&E INFRASTRUCTURE (NAWC)** - This project is intended to revitalize technical infrastructure in order to support the large-scale Global Positioning System (GPS) upgrade--otherwise known as M-code--and provide a path forward for Research, Development, Test, and Evaluation (RDT&E) in weapon navigation techniques. Weapon and platform receivers must be tested and characterized in a variety of environments, and new test equipment is needed to carry out testing thoroughly and efficiently.

**FY23 DISTRIBUTED RF KILL CHAIN RADAR LAB (NAWC)** - Previous work with End Users has shown that in order to transition Advanced EW and Radar Algorithms to various platforms, they must first be demonstrated in near transition prototype hardware. Capability to properly evaluate emerging RF and EW Embedded Technologies to solve the Anti Access/Area Denial Problem is non-existent at NAWCWD Tactical Hardware not is always available for S&T development and demonstration. When available, S&T development must rely on contractors to implement, too slow for S&T pace.

**FY23 MULTI-FUNCTION MOBILE SENSING & EXPLOITATION LABORATORY (NAWC)** - Our Multi-Function Mobile Laboratories are used for supporting a variety of programs and test events across multiple codes. There is a need to upgrade these laboratories to run classified test events. Small Unmanned Aerial Systems (SUAS) are a disruptive technology that needs to be countered as well as utilized in a defensive and offensive manner. There is a need for Countering Small Unmanned Systems in a GPS denied and RF denied environments where SUAS's are preprogrammed to fly via a camera, LIDAR, collision avoidance route programs, waypoints, and/or preloaded mapping to name a few. UAS's have a very small RADAR cross section and are hard to identify with lower resolution passive sensors

**FY23 MOBILE NEWEG (NEXT-GEN ELECTRONIC WARFARE EFFECTS GENERATOR) (NAWC)** - High Fidelity Simulation system compatible with NEWEG Architecture that provides: Mobility, Interoperability with current lab simulation systems, High fidelity RF simulation capability to represent high complexity environments, Modularity capable of working in a wide variety of lab environments, Sustainability to permit upgrades to the system as technology evolves.

**FY23 CORROSION TESTING LABORATORY (NAWC)** - Corrosion is a very serious problem and has a documented cost of more than 21 billion per year. This project will provide NAWCWD with the new capability to perform evaluation and testing of corrosion resistant polymers and materials. This Lab will gear NAWCWD towards becoming a center for corrosion analysis. NAWCWD lacks the ability to test the work function of interfaces and also to measure at the nano-scopic level thin films with lateral resolution at the atomic level and has the inability to identify the molecular composition and to characterize thin films, because current laboratory equipment are insufficient for projected future projects. Research from this laboratory will result in marine corrosion mitigation and effective cost-saving transfer to the U.S. Navy Fleet, increasing operational capabilities and useful life of both submarines and ships.

**FY23 MANNED FLIGHT SIMULATOR (MFS) GEEVS VIRTUAL SIMULATION (NAWC)** - This project, Ground-Test Enhancements using Emulation and Virtual Simulation (GEEVS) system, will be created by adapting COTS products to interface with simulators, creating a persistent, ground-based test capability. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY23 COMPUTED TOMOGRAPHY SCANNER/XRAY (NAWC)** - This project will procure a Computed Tomography Scanner/X-ray system that will support prototyping, sustainment and reverse engineering support for mission requirements in the future. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY23 LEASED RELOCATABLE (LR) 3262 ACQUISITION (NAWC)** - This project will buy a trailer that is currently being leased, and will provide mission space for NAWCAD mission. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY23 MVDC Conversion System– \$1,885k (NSWC Philadelphia; Philadelphia, PA)** – This project integrates the High Speed Generator Test with the 12KVDC MVDC Test Facility. There are no governmental test or research facilities that offer this critical testing capability at advanced MVDC levels. This capability does not create duplication and does not exist in industry or at another government facility. The payback period for this investment is less than 2 years.

**FY23 Building 286 – CAD/PAD Equipment Upgrades– \$1,300K (NSWC Indian Head; Indian Head, Maryland)** - The objective of this project is to procure lean line production equipment and replace antiquated equipment in Building 286 which will increase throughput and overall production execution across all CAD/PAD Manufacturing products. This funding will allow procurement of modern mixing equipment for pyrotechnic compositions, and new test equipment that will provide updated in-process test capability. The payback period for this investment is 9.8 years.

**FY23 Category 1 Mobile Crane Replacement – \$1,600K (NSWC Port Hueneme; Port Hueneme, CA)** - Replaces crane that has exceeded average service life. This equipment is used to support almost every mission that comes to White Sands. Functions performed, but not limited to: lift ordnance for the VLS, install new equipment for launch sites, reduce need for complex lifts, and load shipping containers onto transport trucks. Technical capability alignment: PH02, PH03, PH07, PH08, PH09 and PH11. The payback period for this investment is 9.3 years.

**FY23 Refurbishment of Ordnance Handling Equipment (OHE) – \$1,300K (NSWC Port Hueneme; Port Hueneme, CA)** - Provides for systematic rebuild of Common Use Ordnance Handling Gear, Airlog 3000, 4000 and 4100 and 6200 Units. This equipment is used to ground handle and move majority of energetic large items such as rocket motors. This project directly supports safe and effective ordnance use and provides for a common level of service and usage. Technical capability alignment: PH07 and PH11. The payback period for this investment is 4.6 years.

**FY23 Acoustic Test Facility (ATF) Hoist Upgrade - \$1,550K (NUWC Keyport)** – Procure and integrate and upgraded hoist for the ATF which will allow for commonality between the ATF and TATF facilities. This upgrade and resultant commonality will reduce maintenance costs and provide and update to again technology.

**FY23 System Measurement Platform Mooring Replacement - \$6,000K (NUWC Newport)** – Procure and integrate the 4-point mooring that services the Systems Measurement Platform at the Seneca Lake range facility. The current mooring system is in a failing state and quickly approaching end of life. Failure to replace the mooring system will lead to a test platform that could break free in times of foul weather and thus will be unable to meet the mission to support testing at the range.

**FY23 Jib Crane Upgrade - \$1,497K (NUWC Newport)** – Procure and integrate an upgraded jib crane for Division Newport’s waterfront that is capable of supporting a 30,000 pound capacity (vice the current 10,000 pound capacity) and a 30 foot radius. This upgraded jib crane will provide the increased capability that is required to support the increasing size and weight of UVVs and other R&D efforts that are under development and planned to use the division’s waterfront facilities in the coming years.

**FY24 Multi-Function Laser System (MFLS) (NRL)** – This project will collect more precise lunar ranging data for improved understanding of the Moon’s librations. New investments into a state-of-the-art high energy short pulsed laser at the OTF would reduce maintenance costs at the OTF and preserve NRL as a leader in space geodesy and space navigation, enabling R&D into three burgeoning SLR applications: tracking unenhanced space debris (spent rocket bodies, defunct satellites, etc.) in low earth orbit, lunar ranging with short pulsed laser for development of more precise lunar reference frames, and tracking enhanced objects in orbital regimes beyond geostationary orbit (lunar, cislunar).

**FY24 Confocal Spectroscopic Imaging System (NRL)** – This system enables 25nm lateral resolution for optically interrogating materials down to single particle all in one microscope and includes the increased ability for in-house research and reduction in external evaluation of materials, devices, and systems.

**FY24 NCST High-Temperature Experimental Test Cell for High Speed Propulsion Research (NRL)** – This system will generate clean, high-temperature, and high-speed air flows simulating the combustor environment of a vehicle flying at supersonic/hypersonic speeds to allow propulsion testing in a laboratory setting. This project will naturally bring-in new funding to the NCST and yield a high return on investment for the laboratory as customers retain systems engineering and subject matter expertise support in addition to patronizing this low-cost, high-throughput test cell. The acquisition of this CIP purchase will also allow important cost-reduction benefits for internal experimental and computational research programs.

**FY24 CRYSTALS, THIN FILMS, AND MATERIALS STRUCTURAL CHARACTERIZATION LABORATORY (NAWC)** - Improved analytical equipment to service various missions of NAWCWD, the DON, and the broader DoD. This proposal integrates nine instruments integral to maintaining and supporting active research projects, enabling future opportunities, and providing necessary support across a variety of DoD customers. These projects include novel energetics, advances in fuels from renewable sources and for hypersonic, coatings, and new materials. We require new systems, as noted below, in order to maintain these capabilities to support ongoing projects and to attract new work and sponsors in the future. In addition updating this capability will enable us to partner more effectively with other researchers across DoD, industry and academia.

**FY24 DIGITAL TWIN INFRASTRUCTURE (NAWC)**- This project is to procure and setup a digital twin infrastructure for shared usage by customers. Digital Twin potential for shorter design development timeline and reduced risk in digital algorithm development prior to CDR could be achieved by starting digital firmware/software development and validation in a representative digital environment much earlier than could be achieved in a traditional “heal to toe” program constrained by long lead and target hardware build timelines. Currently software and detailed algorithm development usually cannot happen until hardware is locked down as well as throughput limitations based on hardware stability. This infrastructure has the ability to reduce 20% of a programs schedule, thereby also reducing cost. Additionally, it is much cheaper to have multiple iterations of the digital twin to use in various environments that require high fidelity representation but not the actual hardware; ex. trainers, flight simulators, and modeling environments.

**FY24 ADVANCED OPTICAL RECEIVER LABORATORY FACILITY (NAWC)** - Threat detection range is a key operational requirement for EW systems operating at extreme ranges. A recent commercial breakthrough in electro-optic modulators can deliver a 2x-5x improvement in the detection range of EW receivers by just changing the RF front end of the receiver to an RF over fiber architecture. EA-18G, P-8, and JSF have all recently sponsored S&T projects to adapt this new technology to their receivers. NAVAIR just awarded 2 SBIRs, one for a ruggedized version of the new EO modulator, and a direct to phase 2 to explore RF over Fiber receiver architectures for the ALQ-218. NAWCWD lacks the facilities to test and evaluate RF over Fiber receiver components and systems.

**FY24 SAIL NETWORK TACTICAL COMMON DATA LINK (NTCDL) (NAWC)** - The Surface/Aviation Interoperability Laboratory (SAIL) facility provides programs with an up front and early exposure to deployed naval systems and capabilities that provide risk reduction and cost efficiency for customers. SAIL has a requirement to provide realistic and shipboard representative data links to support the Integration, Interoperability, and Developmental Testing of Tactical Data Link. Naval aviation assets utilize common data links systems (CDLS) to pass sensor data as well as voice and command and control information, and video to shipboard assets in order to support surface force missions. The current CDLS located at SAIL will become obsolete with the baselines in the fleet. SAIL’s outdated CDLS system is not able to implement all of the 15 different waveforms, with five simultaneous links, which may be transmitted and received from all variants of CDL-equipped aircraft. This project will procure, install, and integrate a NTCDL system. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY24 FLIGHT SIMULATION EQUIPMENT (NAWC)** - The NAWCAD Air Vehicle Test and Evaluation Division (AVTED) plans, safely conducts, analyzes, and reports on developmental tests of USN/USMC aircraft and installed systems for NAWCAD and NAVAIR in support of advancing capabilities and operational readiness for naval aviation and our warfighters. AVTED fosters innovation in Test and Evaluation (T&E) methodology, techniques, and use of new technology. Current simulators use outdated hardware and are not able to demonstrate multiple emerging technologies that are essential to current and future acquisition programs, such as the Joint Strike Fighter (JSF), CH-53K, Future Vertical Lift, F/A-XX, and others. This project will procure upgraded simulator capabilities. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 ORDNANCE INTEGRATION SUPPORT TEAM (OIST) MASS PROPERTY INSTRUMENT EQUIPMENT (NAWC)** - The Ordnance Integration Support Team provides mass property measurements for all NAE flight test programs. Mass Property measurements/data are required prior to and in support of all NAE Air Vehicle Stores Compatibility captive carriage and weapons separation test events. OIST’s Mass Properties Machine is used to provide 3-axis center of gravity and moment of inertia measurements for multiple air vehicle stores and munitions types. The existing Mass Properties Machine was procured in 2008 and is reaching the end of its service life. This project will procure a new Mass Properties Machine. This project will procure upgraded simulator capabilities. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 Building 731 Bay 3 CT Vault– \$1,750K (NSWC Indian Head; Indian Head, Maryland)** - Procure a turn-key industrial Computed Tomography (CT) system in order to increase efficiency of current inspections and add new capabilities. This system will be capable of performing DR and CT X-ray inspections for various programs. The payback period for this investment is 3.8 years.

**FY24 Complex Q Procurement– \$1,300K (NSWC Carderock; Bethesda, MD)** – Procurement of a modular building structure in support of technical research office space for the Code 80 Center for Innovation and Ship Design (CISD) and administrative office space for the Code 10 Property Management function. If not funded, the modular structure will remain a

leased facility. The command will continue towards identifying alternative space for this requirement however none exists in the adjacent area near Building 18. A new footprint CIP funded facility on the site is expected to exceed \$5M in construction costs as an alternative solution. The payback period for this investment is 6.2 years.

**FY24 Underwater Remotely Operated Vehicle– \$1,270K (NSWC Carderock; Bethesda, MD)** – Replace the current ARD inspection ROV with an work class ROV platform providing enhanced tracking, optics, and mechanical manipulation in support of operations, maintenance, and project modifications to NSWCCD Acoustic Research Detachment (ARD) underwater test facilities and all other NSWCCD Detachments. The current ROV was procured in 1998, is at end of life, and is no longer supported by the manufacturer for replacement parts or service. The payback period for this investment is 7.1 years.

**FY24 Annealing Ovens Process Water Cleaning System Replacement– \$1,891K (NSWC Indian Head; Indian Head, Maryland)** - This project will replace the two existing, but obsolete, photocatalytic reactors at the unique double-base propellant grain annealing oven facility located in the Extrusion Plant. New reactors will be state-of-the art custom configured versions that are three times more powerful, include smart controls that report the condition of the UV lamps, quartz lamp tubes and ballasts back to the control system, and utilize non-fouling catalyst isolation filtration and microbubble reaction air addition. Also includes a mineral salt removal and pH control system to replace the facility's non-functional steam still as the dissolved solids handling system. The payback period for this investment is 3 years.

**FY24 Primer Line Redesign and Installation– \$1,500K (NSWC Indian Head; Indian Head, Maryland)** - Acquisition of a semi-automated ignition device manufacturing line that will incorporate improvements to tooling, material handling, and in-process inspections. Includes electrical work and installation of equipment. The line will allow production of multiple primer lots simultaneously in the CAD/PAD manufacturing area. The payback period for this investment is 5 years.

**FY24 RF Anechoic Chamber– \$1,900K (NSWC Panama City; Panama City, FL)** – Replace existing aging, obsolete, and limited frequency range RF Anechoic Chamber capabilities through the procurement and installation of a new RF Anechoic Chamber and state of the art measurement equipment. The payback period for this investment is 5.4 years.

**FY24 Electromechanical Actuator Test Facility– \$1,820k (NSWC Philadelphia; Philadelphia, PA)** – This project constructs approx. 1300 sq. foot facility to support critical Fleet needs as part of NAVSEA Strategic Pillar. This test site will become the center of excellence for these actuators. The payback period for this investment is less than 1 year.

**FY24 Hydrostatic Pressure Vessel - \$3,000K (NUWC Newport)** – Procure and integrate a Hydrostatic Pressure Vessel to perform test and evaluation of shipboard systems relative to volume requirements and hydrostatic pressure requirements. The current Hydrostatic Pressure Vessel is reaching end of life and no longer have the capability to perform external volume testing and maintain sufficient pressure for testing.

**FY24 System Measurement Platform Power Cable Replacement - \$5,000K (NUWC Newport)** – Procure and integrate the submarine power cable that services the Systems Measurement Platform at the Seneca Lake range facility. The current submarine power cable is in a failing state and quickly approaching end of life. Failure to replace the power cable will lead to a test platform without power and thus will be unable to meet the mission to support testing at the range.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Department of the Navy/ Research and Development		#002 - ADPE				Research and Development			
ADP Equipment	FY 2022			FY 2023			FY 2024		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Computer Hardware (Production)	8	1,333	\$10,662	6	1,318	\$7,909	3	3,573	\$10,719
Computer Hardware (Network)	9	1,117	\$10,055	7	1,357	\$9,500	9	2,046	\$18,415
Computer Software (Operating System)	0	0	\$0	0	0	\$0	0	0	\$0
Telecommunications	5	921	\$4,605	2	595	\$1,189	0	0	\$0
Other Support Equipment	4	1,531	\$6,124	6	864	\$5,181	3	1,799	\$5,397
<b>Total</b>	<b>26</b>	<b>1,209</b>	<b>\$31,446</b>	<b>21</b>	<b>1,132</b>	<b>\$23,779</b>	<b>15</b>	<b>2,302</b>	<b>\$34,531</b>
<b>Justification:</b>									
<p>The investment in the other support equipment capability provides additional stability and remote accessibility through cloud migration. An economic analysis has been performed. Without this investment, there will be ongoing latency in the areas of onboarding. This is a Naval Innovative Science and Engineering (NISE) project.</p> <p>The investment in the other support equipment capability provides simulator hardware and software for Satellite Positioning Navigation (PNT) and Timing signals. An economic analysis has been performed. Without this investment, there would be limited abilities to test and evaluate emergent technologies in simulated environments. This is a NISE project.</p> <p>These Computer Hardware (Production) investments ensure network 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, technical refresh of classified clusters, intrusion detection control systems, high speed computing, and research and development. Equipment also supports maritime modeling, simulation, and testing. Such investments provide technology tools for the research and development community and continuity of operations for standard business systems throughout the Warfare Center. ADP Equipment supporting the research and development community must remain on the cutting edge of technology to conduct complex simulations, harness advanced data analytics &amp; machine learning capabilities, perform predictive analysis, and analyze surface ship system performance. Current equipment supporting mission essential systems will no longer be supported by the manufacturer. ADPE Computer Hardware Production projects have an estimated useful life of 10 years and the average payback period is 4 years.</p> <p>These Computer Hardware (Network) investments ensure network connectivity to all Naval Warfare Center activities and procurement of hardware for mission essential research and development computing needs and centralized system hosting including: RDT&amp;E upgrades and networks, fiber infrastructure, business system replacement, and high speed computing. Investments provide technology tools for the research and development community and continuity of operations for standard business systems throughout the Warfare Center. ADP Equipment supporting the research and development community must remain on the cutting edge of technology to conduct complex simulations, harness advanced data analytics &amp; machine learning capabilities, perform predictive analysis, and analyze surface ship system performance. Current equipment supporting mission essential systems will no longer be supported by the manufacturer. Investments will include virtualized combat systems, advanced networking test beds, and cellular signal repeater systems. ADPE Computer Hardware Network projects have an estimated useful life of 10 years and the average payback period is 3 years.</p>									

These Telecommunication investments support telecommunications equipment for the surface ship research and development community. Investments provide secure public address systems and video teleconferencing upgrades that meet operational and cybersecurity requirements. Failure to make these investments subjects communication systems to cyber terrorism, espionage, or other threats; additionally, it will jeopardize the ability to mass communicate in the event of an emergency. Telecommunication projects have an estimated useful life of 10 years and the average payback period is 2 years.

PROJECTS ABOVE \$1M

**FY22 5G Technology Wireless Network Laboratory Testbed (NRL)** – This project is expected to have 5G cellular communication networks and ancillary networking technologies will become a significant testing and verification challenge for the US Navy Electronic Warfare and Cyber Operations research communities. This testbed will include both laboratory and commercial grade 5G networks to enable Electronic Warfare (EW) and Cyber operations researchers to develop appropriate countermeasures to the use of 5G networks by our adversaries.

**FY22 Classified Enclave for Research and Development (CERAD) (NRL)** – This project current access to classified technical computing resources is limited to program-specific assets. These improvements will make NRL even more competitive as a Working Capital Funded activity and will lead to new and sustained areas of sponsored research and development for the lab.

**FY22 Global Communications Backbone (GCB) Modernization (NIWC)** – This project in FY22 in the computer hardware (network) capability will provide increased range and higher speeds, and a combination of higher speeds at an increased range. WIFI 6 also has increased security with its support of WPA3. Without this investment, communications will continue to use slower equipment whose lifecycle will end in November of 2023. This is a NISE project.

**FY22 Next Generation Communications Equipment (NIWC)** – This project in FY22 in the other support equipment capability will provide equipment for the millimeter wave communication setup capability. An economic analysis has been performed. Without this investment, it would limit the ability to test and evaluate communication systems at higher frequencies. This is a NISE project.

**FY22 ELECTRONIC ATTACK MODELING SYSTEM (EAMS) (NAWC)** - A High Fidelity Data Acquisition and Playback system is required. This project will provide the ability to locally view and observe Threat ELINT, capture and playback threat EA and simulator waveforms, facilitate rapid data sharing with Intel Agencies, and provide seamless collaboration of raw Intel data. We will develop more accurate threat-realistic EA simulators that can quickly replicate new observed waveforms for program sponsors. If not funded, we will rely on resource-constrained Intel agencies, rely on scarce and expensive threat surrogates for OT&E with less operational realism, and rely on less efficient and fewer Verification & Validation (V&V) efforts for threat simulators.

**FY22 NETWORK EXPANSION (NAWC)** - This project will expand WIFI capabilities for NAWCAD that will provide more efficient RDT&E operational capability. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY22 Virtual Strike Group Testing Capability Phase 3 – Multi-Sec Level – \$1,326K (NSWC Dahlgren; Dahlgren, VA)** - Phase 3 of creating a fully informed/multiple- security-level digitized infrastructure (Digital Proving Grounds) to integrate VTE and various Labs assets to represent a Strike Group configurations to support full cross-domain spectrum of warfare system, element, and combat system integration & interoperability (IOP) testing in the Bldg 1490 Expansion area. The payback period for this investment is 3 years.

**FY22 Common Combat Systems Integration Lab – \$3,642K (NSWC Port Hueneme; Port Hueneme, CA)** – This project establishes integrated combat systems environment (comprised of virtual and live elements) to support ISEA, Test & Evaluation, and Product Support mission areas across surface combatants including Aegis, FFG(x), OPC, SSDS ships, Littoral Combat Ships, and others, with flexibility to also support future configurations. The payback period for this investment is 7 years.

**FY22 NREN (RDT&E Network Consolidation) – \$2,250K (Enterprise-level project hosted at NSWC Crane; Crane IN)** – The NREN RDT&E consolidation project has identified a number of services that can be consolidated. The NREN network is currently consolidating those services to bring additional security and visibility to the RDT&E Network. This project will add additional hardware, software, storage and monitoring capabilities required to allow for the further consolidation of the RDT&E Network. The payback period for this investment is 5 years.

**FY22 NMCI Network Infrastructure Modernization – \$2,750K (NUWC Newport)** - Procure and integrate the hardware required to upgrade NMCI from multi-mode to single-mode fiber in order to improve network performance and increase the bandwidth to 10G in order to elevate the user experience.

**FY22 Cell Signal Repeater System – \$1,350K (NUWC Newport)** - Procure and integrate the hardware required to improve the cellular signal broadcast on the command to facilitate efficient and versatile communication methods. This will enable the workforce to effectively communicate using cellphones across the command.

**FY22 Land Based Environment Testbed – \$1,000K (NUWC Newport)** - Procure and integrate the hardware and perform the network connections and software upgrades to provide a real-time reliable wide area search and surveillance system for fixed/mobile and shallow/deep water systems which is integrated with ashore commands to provide a common operational picture to complete the kill chain from sensor to shooter to complete mission engagement.

**FY23 Graphics Processing Unit Cluster for Digital Signal Processing / Machine Learning (GPU Cluster) (NRL)** – An economic savings will accrue directly to the Navy in general and NRL in particular by elevating the fidelity and performance of the M&S capability already required as part of the Developmental Test (DT) and Operational Test (OT) processes of in-development Navy systems. Every simulation that is more faithful to reality provides more confidence in the effectiveness of soon-to-be-deployed systems, which shortens timelines and reduces the need for expensive live tests. Every simulation that uses hardware more efficiently and delivers answers sooner saves NRL money in operational and labor overhead.

**FY23 Secret Wide Area Network (SWAN) Upgrade (NIWC)** – This project in FY23 in the computer hardware (network) capability will provide a technical refresh and upgrade of Secret Wide Area Network (SWAN) infrastructure to support the expansion of new security requirements ensuring compliance and cybersecurity. The SWAN network supports technical efforts which support the warfighter. An economic analysis has been performed. Without this investment, the SWAN network infrastructure would require additional maintenance cost and sever outages putting the network at risk and negatively impacting the warfighter. This is a NISE project.

**FY23 Combined Test Bed Laboratory Modernization (NIWC)** – This project in FY23 in the other support equipment capability will provide increased Combined Test Bed Command, Control, Communication, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) capabilities to allow continued Fleet and Sponsor support utilizing both current and future Fleet capabilities. Additionally, it ensures Program of Record (PoR) system alignments. An economic analysis has been performed. Without this investment, there will be significant limitations on the ability to test and evaluate C5ISR systems adding vulnerabilities to the communications equipment provided to the Warfighter. This is a NISE project.

**FY23 INTEGRATED FIRES LABORATORY (NAWC)**- This CIP project is to provide the equipment for Michelson Laboratory Wing 5 after the renovation is complete. Wing 5 is currently under renovation and when completed will provide an ICD-705 compliant facility. Wing 5 will be utilized to house the Integrated Fires Laboratory which is a command initiative that will provide a multi-level security environment. The Integrated Fires Laboratory will include virtual ranges that support multi-mission, multi-domain mission-level analysis, and integration across the Carrier Strike Group.

**FY23 EA INTEGRATED BATTLEFIELD M&S (NAWC)** - MALD-N and EA UAV mission planners need the capability to integrate the UAS with the Growler to most effectively and efficiently plan a mission with tools that provide an integrated battlefield by considering all aircraft and weapons, including adversarial forces. EA UAV programs, including expendables, require payload development and test capabilities. The quantity and mission diversity in EA UAV and expendable systems operation present challenges in payload development and test from both a capability and cost standpoint. Advanced laboratories are required to adequately and cost-effectively develop and test increasingly sophisticated EA payloads.

**FY23 RDTE NETWORK TRANSPORT UPGRADE (NAWC)** - The project will implement a Commercial Solutions for Classified (CSfC) system to allow access to classified systems via an unclassified transport for NAWCAD. Alternatives have been considered, however this project is the most cost effective solution for the government.

**FY23 PDS Breezeway decommission & Design – \$1,500K (NSWC Corona; Corona, CA)** - Design for decommissioning the breezeway Protected Distribution System (PDS) network and rerouting the PDS to inner compound buildings along an alternate compliant pathway. Existing breezeway PDS is not compliant and in need of correction. PDS Certifications are all connected and at risk of decommissioning, which would bring multiple secure networks at NSWC Corona down. The payback period for this investment is 7 years.

**FY23 Supercomputer Facility at NSWC IHD– \$1,200K (NSWC Indian Head; Indian Head, Maryland)** - NSWC IHD M&S IPT in coordination with departments 10, D, E, G, and R proposes procurement of a supercomputer to propel S&T Thrust Enabling Capabilities of Advanced M&S/MBSE (modeling and simulation) that encompasses all the remaining NSWC IHD S&T Thrust Areas to the next level by increasing the computing power and speed by a minimum of 5-to-10 times across all technical departments D, E, G, and R. The payback period for this investment is 0.3 years.

**FY23 DESIL Operation Center – \$2,437K (NSWC Port Hueneme; Port Hueneme, CA)** – Establish an integrated combat systems environment (comprised of virtual and live elements) to support the implementation of ISEA, T&E, and Product Support mission areas at the Directed Energy (DE) Systems Integration Lab (DESIL). Systems at DESIL will engage live targets on the Point Mugu Sea Range (PMSR) or at a land-based Point Mugu target site. Those test events will be controlled from an Operational Control Room (OCR) at the PMSR. The needed combat systems environment will provide the real-time capability to coordinate the operation of virtual and live elements at DESIL with test events controlled from an OCR, and will be comprised of a DESIL Operation Center (DOC), a Secure DESIL Operation Center (SDOC), and voice and data communications capability. Customers include ONR, IWS2, DE JTO, NSWC, NRL, Industry and other DoD Services. The payback period for this investment is 10 years.

**FY23 Surface Warfare High Performance Analysis and Resource Center (SHARC) –Multi-Sec Level, Phase 1 – \$1,200K (NSWC Dahlgren; Dahlgren, VA)** – Phase 1 of creating a fully informed/multiple- security-level digitized infrastructure (Digital Proving Grounds) to integrate VTE and various Lab assets to represent Strike Group configurations to support full cross-domain spectrum of warfare system, element, and combat system integration & interoperability (IOP) testing in the Bldg 1490 Expansion area. The payback period for this investment is 3 years.

**FY23 Cyber Research Assessment Virtual Environment (CRAVE) Infrastructure Expansion - \$1,200K (NUWC Keyport)** – Procure and integrate the hardware to modernize the network infrastructure throughout multiple in-service engineering facilities/laboratories to improve performance and meet growing cybersecurity requirements. The design will allow for current and future bandwidth, reliability and security requirements.

**FY23 NMCI SIPR Network Infrastructure Modernization - \$1,080K (NUWC Newport)** – Procure and integrate the hardware required to upgrade NMCI SIPR from current 100Mb levels to 1Gb levels in order to improve network performance and elevate the user experience.

**FY24 (LOBO) Rejuvenating and Enhancing the Navy's VLITE Asset (NRL)** – This investment will have precision measurements of density variations within Earth's ionosphere exceed that of commonly used Global Positioning System (GPS) methods by over two orders of magnitude, providing unmatched tests of global and regional models such as NRL's SAMI (Sami is Another Model of the Ionosphere). This purchase reduce data gaps that limit operational efficiency, but it will also yield improved image quality and the ability to detect fainter cosmic sources.

**FY24 Research, Development, Test & Evaluation (RDT&E) Network Upgrade (NIWC)** – This project in FY24 in the computer hardware (network) capability would provide a tech refresh/upgrade of RDT&E Network Security infrastructure. Various network devices will be required to support advances in technology, expansion and new security requirements. Additionally, core infrastructure, Host based Security System (HBSS) monitoring, and Assured Compliance Assessment Solution (ACAS) scanning servers will continue to be hosted on-site. The RDT&E network supports technical efforts which support the warfighter. An economic analysis has been performed. If the project is not funded, the RDT&E Network infrastructure would remain in its current state with a potential for increased maintenance costs and server outages that would put the network at risk.

**FY24 INTEGRATED FIRES LABORATORY (NAWC)** - This CIP project is to provide the equipment for Michelson Laboratory Wing 5 after the renovation is complete. Wing 5 is currently under renovation and will provide an ICD-705 compliant facility once the renovation is complete. Wing 5 will be utilized to house the Integrated Fires Laboratory which is a command initiative that will provide a multi-level security environment. The Integrated Fires Laboratory will include virtual ranges that support multi-mission, multi-domain mission-level analysis, and integration across the Carrier Strike Group.

**FY24 UNIFIED COMMUNICATIONS #2 (NAWC)** - Communications networking systems are used to connect the NAWCAD community by providing worldwide access for video and voice to provide collaborative information sharing and analysis. The existing network infrastructure is outdated and nearing end of life which is raising concerns with interoperability and the ability to obtain and share information with community partners. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 RDT&E SECURITY OPERATIONS VISIBILITY AUTOMATED RESPONSE (SOAR) (NAWC)** - The NAWCAD Digital Networks and Applications (DNA) Department provides NAWCAD Information Technology (IT) infrastructure, application support, and Information Assurance (IA) services. The Security Operations Center (SOC) is responsible for managing security incidents, remediation activities, and proactive monitoring of the RDT&E network. The SOC Team must be able to monitor network security, prioritize alerts, and provide initial response to those alerts. This project will procure a Security Operations Automated Response system that will provide additional network security capability. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 RDT&E ARCHITECTURE UPGRADE (NAWC)** - The NAWCAD RDT&E Enterprise Network supports all current test programs and laboratories /test facilities, by providing the single protected data environment for processing and evaluating weapon systems test performance on a variety of engineering platforms. This project will procure new architecture equipment to support next-generation network needs, including IA requirements. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 PDS Breezeway Re-route Construction – \$3,000K (NSWC Corona; Corona, CA)** - Existing breezeway PDS is not compliant and in need of correction. PDS Certifications are all connected and at risk of decommissioning, which would bring multiple secure networks at NSWC Corona down. The payback period for this investment is 7 years.

**FY24 Advanced PRTR Fiber Optic Capability – \$2,100K (NSWC Dahlgren; Dahlgren, VA)** – Installation of underground conduit and replacement of the fiber optic infrastructure between DD Mainside Building 997 and the Explosives Experimental Area and PRTR range stations. The existing fiber optic infrastructure has been located on the riverbed for over 30 years and is beyond end of life. The portion between 997 and EEA has insufficient capacity to support mission. Phase 1 will replace the connection between 997 and EEA via directional boring of a conduit under Machodoc Creek. This buried conduit will provides an environmentally hardened solution to upgrade current the fiber optic connection to EEA and facilitates future upgrades. The conduit also provides improvements to the physical security of the ranges network infrastructure. Phase 2 will install additional fiber from Range Station 3B to Range Stations 7, 9, 11, 13 and 21. The resulting fiber infrastructure will support integrated testing at EEA and on the PRTR. The payback period for this investment is 2 years.

**FY24 Digital Transformation Architecture – \$4,000K (NUWC Newport)** - Procure and integrate the hardware to establish a command wide architecture solution to support digital transformation initiatives in digital engineering, model based systems engineering, DevSecOps, and other areas. The effort will directly affect inter-organizational collaboration and enhance workforce productivity through centralized access to high performance storage and computing resources.

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Department of the Navy/ Research and Development		#003 - Software Development				Research and Development			
Software	FY 2022			FY 2023			FY 2024		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Internally Developed	0	0	\$0	0	-	\$0	2	554	\$1,108
Externally Developed	2	1,528	\$3,055	0	-	\$0	1	995	\$995
<b>Total</b>	<b>2</b>	<b>1,528</b>	<b>\$3,055</b>	<b>0</b>	<b>-</b>	<b>\$0</b>	<b>3</b>	<b>701</b>	<b>\$2,103</b>
<b>Justification:</b>									
These investments will support the acquisition or development of software for the more effective and efficient operation of navy owned facilities/models.									
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.									
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. The useful life for these projects is 5 years.									
PROJECTS ABOVE \$1M									
<b>FY22 Network Centric Collaborative Targeting (NCCT) – \$2,080K (Enterprise-level project hosted at NSWC Crane; Crane IN) - Leveraging Agile and DevSecOps methodologies, the upgraded NCCT will add the air track fusion capabilities to current fusion capabilities. This upgraded NCCT builds upon the NCCT Software Development Kit (SDK) for 3rd parties and has been developed to enable rapid technology insertion, e.g., multi-INT sensor and data fusion integration for distributed ISR sensor network operations. The payback period for this investment is 1.7 years.</b>									

CAPITAL INVESTMENT JUSTIFICATION				FISCAL YEAR (FY) 2024 BUDGET ESTIMATES					
(DOLLARS IN THOUSANDS)				MARCH 2023					
Department of the Navy/ Research and Development		#004 - Minor Construction				Research and Development			
Minor Construction	FY 2022			FY 2023			FY 2024		
	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost	Quant	Unit Cost	Total Cost
Replacement	8	3,021	\$24,171	13	2,529	\$32,875	13	2,551	\$33,159
New Construction	36	2,006	\$72,217	26	2,829	\$73,562	41	2,419	\$99,180
Environmental Capability	1	2,850	\$2,850	0	0	\$0	0	0	\$0
<b>Total</b>	<b>45</b>	<b>2,205</b>	<b>\$99,238</b>	<b>39</b>	<b>2,729</b>	<b>\$106,437</b>	<b>54</b>	<b>2,451</b>	<b>\$132,339</b>

**Justification:**  
Minor Construction projects replace obsolete facilities, consolidate operations for productivity increases, provide state of the art processing areas for new research & development missions, and correct environmental/safety deficiencies. Minor construction projects include all costs to deliver a complete and usable project. Minor Construction is used at the Naval Warfare Centers to: (1) modify existing spaces and construct new facilities to provide suitable space to design and test new equipment for the surface warfare community; (2) improve security measures and provide increase security for new initiatives; (3) reduce operating expenses by building or improving government owned facilities so that leased space, high maintenance space, or portable space may be vacated; (4) reduce energy consumption by installing energy efficient building systems; (6) modify existing systems to bring facilities up to current building, safety, or environmental codes. Failure to make these investments may render our infrastructure and facilities unable to support modern technologies and operational capabilities, pose environmental risks, and may result in human casualties in the event of structural collapse or some other unforeseen catastrophe. Minor Construction projects such as buildings and warehouses have an estimated useful life of 40 years; minor construction projects such as towers, wharves, and docks have an estimated useful life of 20 years. The average payback period is 13 years.

**PROJECTS OVER \$1M**

**FY22 Laser Lab Heating, Ventilation, and Air Conditioning (HVAC)/Power Upgrade (NIWC)** - This replacement project in FY22 modernizes electrical power and HVAC within the Laser Lab. An economic analysis has been performed. Without this investment, the facility may be unable to support research and development lab requirements. This project is part of the LRP.

**FY22 Applied Research Information Analytics Lab (ARIAL) Modernization (NIWC)** – This replacement project in FY22 modernizes physical infrastructure, electrical power, and Heating, Ventilation and Air Conditioning (HVAC) within the lab. An economic analysis has been performed. Without this investment, the facility may be unable to support Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) lab requirements. This project is part of the LRP. This is a Naval Innovative Science and Engineering (NISE) project.

**FY22 Topside Basement Classified Hub Conversion (NIWC)** – This replacement project in FY22 converts 3000 square feet of unclassified administrative space to a secure hub to meet Open Secret and higher classified level projects. A detailed cost analysis will be performed as part of the planning process once the scope has been finalized and independent government estimate (IGE) has been validated. A formal net present value life-cycle economic analysis will not be performed for this project, since this project is below the thresholds for this requirement as outlined in OPNAVINST 11010.20H. Cost savings/avoidance are to be determined. Without this investment, sponsor project timelines and the delivery of science and technology products to the fleet will be delayed due to an inability to communicate via secure methods.

**FY22 Building 3147 Communication and Information Technology (IT) Collaboration Space (NIWC)** – This replacement project in FY22 will provide Heating, Ventilation and Air Conditioning (HVAC) upgrades and renovations, and the installation of walls and utilities to support work environments including installation of light circuits, and communications lines. An economic analysis has been performed. Without this investment, the development, delivery, and increased productivity to provide the capabilities of integrated, interoperable, and effective Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), Business Information Technology, and Space Systems will be impacted. This project is part of the LRP.

**FY22 Building 3147 Rooms 2100/2200 Open Secret Storage (OSS) Space (NIWC)** – This replacement project in FY22 will renovate and repurpose existing unclassified space as well as increase capabilities for a secure laboratory environment. An economic analysis had been performed. Without this investment it will impact the productivity, development, and the delivery to provide the capabilities of C4I, C2ISR and ES to the warfighter. This project is part of the LRP. This is a NISE project.

**FY22 Building 3112 Common Submarine Radio Room (CSRR) Security Modernization (NIWC)** – This replacement project in FY22 will replace and expand the capability of the existing room and Laboratory, Building 3112. This project will increase the required higher security rating of Open-Secret in Room 07 & Lab 03. Appropriate HVAC, plumbing, Information Technology (IT) infrastructure, lighting and electrical systems will be included, along with handicap accessibility throughout the building. Without this investment Command security requirements will not be met. This project is part of the LRP.

**FY22 Quantum Information Technologies Lab (NIWC)** – This project in FY22 provides laboratory space for research, development, test and evaluation associated with the integration of related systems and subsystems of electrical, electronics and communications systems with the platform (air, sea, ground, etc.) upon which they will operate. It will also provide the ability to verify interface consideration with other systems operating on the respective platform. An economic analysis has been performed. Without this investment, the ability to rapidly deliver current and next generation capabilities, products and services will be impacted. This project is part of the LRP.

**FY22 Command, Control, Communication, Computers, Cyber-Defense and Combat Systems and Intelligence, Surveillance and Reconnaissance (C6ISR) Test and Evaluation Platform (NIWC)** - This project is in FY22. The project will expand and replace the existing outdoor operations testing area and provide a properly configured staging and testing area within a fenced outdoor compound. It will include construction of a concrete pad for staging requirements, underground power service, and installation of external power, and security fencing. The compound will include a 9,900 square feet Rubb building with shipping/receiving, assembly, storage rack, workbench areas, outdoor equipment staging areas, and correctly positioned concrete antenna pads. The new compound and Rubb building will provide the lab space required to build, test, and evaluate C6ISR system operations. It will also provide space to store back-up antennas and related equipment. The Test and Evaluation Platform will provide adequate electronics test and integration space needed to support equipment development, programming, testing, rack integration, and deployable equipment construction by the C6ISR Integrated Project Team (IPT). Once the outdoor compound and the Rubb building is complete, the existing staging area will be demolished. An economic analysis has been performed. Without this investment, the C6ISR system operations will be limited and the area will not be sufficient to house highly sensitive deployable equipment. This project is part of the Laboratory Revitalization Program (LRP). This is a Naval Innovative Science and Engineering (NISE) project.

**FY22 Command, Control, Communications, Computers, & Intelligence (C4I) Battlespace Awareness/Command Control Laboratory (NIWC)** – This project in FY22 will provide 6,000 square feet of new facility space to further expand capabilities of Command, Control, Communications, Computers, & Intelligence (C4I) Battlespace Awareness/Command Control. Existing facilities do not fully meet minimum laboratory capabilities for Information Technology (IT) infrastructure, testing and evaluation environments, or power and cooling. The project will provide lab and engineering space with infrastructure (IT, power, cooling, etc.) capable of supporting a wide array of communication systems, networks, electronic equipment, controls, electromagnetic equipment, optical systems, radar, sonar, and cyber networks. The new laboratory space will provide an environment for more efficient and greater capabilities for testing, evaluation, and engineering and will allow state of the art information warfare capabilities to be delivered to the fleet and other customers. An economic analysis has been performed. Without this investment, there will be limited infrastructure for IT, power and cooling capabilities directly affecting productivity, and limited ability to develop new/advanced information warfare capabilities for the fleet and other C4I customers. This project is part of the LRP. This is a NISE project.

**FY22 OPEN ENERGETICS STORAGE (NAWC)** – Currently items that are too large to be stored inside the magazines are stored outdoors with non-compliance to the requirements of DoN Physical security instructions. A temporary storage area will reduce energetic handling operations into and out of magazines for the routine interim storage within individual test series. This project will fill an infrastructure gap within the Energetics Enterprise onboard China Lake by constructing an open storage area that will streamline processes and complies with OPNAVINST 5530.13C and NAVSEA OP-5. The project consists of constructing a 4800sf pre-engineered shade structure for use as an outside storage facility for energetics located in the China Lake Propulsion Plant site. Project will construct 60'x 80' covered (16' eave height) and 40'x 80' uncovered storage areas, 100,000# NEW capacity, gravel access roads, gravel floor for both covered and uncovered areas, lightning protection, static grounding, and security fencing. Explosive site approval has already been given. Project has been re-scoped to bring costs down without having to renegotiate site approval. CCTV and intrusion detection system removed from scope of work with past concurrence in writing from explosive safety. This project is under the LRP authority of not to exceed \$6M.

**FY22 MINCON PLANNING AND DESIGN (NAWC)** – MINCON Planning and Design will fund the design for NAWCAD construction projects. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY22 B678 SEAMLESS LAB EXPANSION LRP (NAWC)** – This project will construct an addition to building 678 that will create additional footprint to support Aircraft Launch Recovery Equipment (ALRE) Next Generation systems and Additive Manufacturing capability mission. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY22 JET CAR TRACK SITES (JCTS) MAINTENANCE AND STORAGE FACILITY MINOR CONSTRUCTION (NAWC)** - The jet car tracks test complex is a unique national asset that is part of the NAWCAD mission to support and develop Aircraft Launch and Recovery Equipment (ALRE) for naval aviation. JCTS is responsible for design, development, evaluation, verification, fielding, and in-service engineering support for ALRE. Additionally, JCTS allows for cost effective shipboard and shore-based arresting gear development as well as testing and development of Air Force, Joint Service, foreign military sales projects, and commercial ventures. In order to enhance fleet support test capability of the JCTS, it is necessary to protect our assets from harsh environmental conditions. This project will install an enclosure system to provide protection, maintenance space, air start capability, electrical / air service and will allow for aircraft barricade testing and all necessary jet car configurations. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY22 LR 168 INFRASTRUCTURE (NAWC)** - This project will provide an infrastructure capability to support a leased relocatable trailer that will provide additional space for NAWCAD mission requirements. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY22 High Power Anechoic Test Chamber – \$6,000K (NSWC Dahlgren; Dahlgren, VA)** – Design and install a large (100 ft x 70 ft) fully anechoic high power test chamber in building 150 to ensure the ability to conduct indoor testing to the new electromagnetic environments (EME) contained in MIL-STD-464D created by emerging systems. Testing indoors helps to minimize the potential impacts to base operations. The payback period for this investment is 7 years.

**FY22 Acoustic Test Facility Pier Instrumentation Building– \$3,000K (NSWC Panama City; Panama City, FL)** – Funds to construct a facility to replace a 60+ year old building that serves as the instrumentation building for the Acoustic Test Facility (ATF) Pier. The Building will house precision positioning control instrumentation. The payback period for this investment is 6 years.

**FY22 B544 RM 1103/1104 Secure Space Conversion– \$2,433K (NSWC Corona; Corona, CA)** – Current 1400 area secure spaces are overcrowded and do not have capacity to support expanding requirements. Adjoining 1300 area occupants will be relocated, providing opportunity to expand into an already secured compartmented facility. The payback period for this investment is 20 years.

**FY22 Data Analytics Complex 1– \$7,079K (NSWC Corona; Corona, CA)** - Building 204 Expansion - Design and build an RS designated building for office, collaboration and meeting space. This project will address the lack of office and collaboration space for the RS department. Mission growth and Command direction has increased the need for Open Secure Space (OSS) within the inner compound resulting in RS needing to relocate to a new purpose built facility. NSWC transferred \$1,447K operating authority to contract authority; a process locally termed a “capital surcharge”, to execute this project in accordance with Title 10 U.S. Code 2363. It executes as a part of NSWC’s Naval Innovative Science and Engineering (NISE) program. The payback period for this investment is 45 years.

**FY22 Composites Engineering Innovation Center (CEIC) – \$6,360K (NSWC Crane; Crane, IN)** – Composite materials and their interactions with RF and other types of directed energy represent a rapidly growing area of interest in the Electronic Warfare, Surveillance and Communications communities. This investment in engineering lab, rapid prototype and model & sim facility proposed by CEIC will allow Crane to perform the S&T tasks needed to generate innovative solutions to existing and future Fleet composite problems. The S&T lab space will be located adjacent to autoclave and cleanroom equipment that are necessary for processing composites, operations will benefit from a new facility layout that will enable rapid prototyping and M&S capability. The payback period for this investment is 4 years.

**FY22 Crane - Laboratory Infrastructure Network Communications System (C-LINCS) Phase 4 – \$1,351K (NSWC Crane; Crane, IN)** – The RDT&E Network provides advanced support of network hardware (i.e. DREN, SDREN, JMETC, NTN) and central management of IT Systems, enabling communications/collaboration with/by strategic customers and Warfighters. The key to enabling this capability is the availability of base fiber to connect systems across base. NSWC Crane is out of available fiber or critical low in the downtown area. The first path is adding 288 strands of fiber in a buried duct bank capable of supporting over 3000 strands of fiber from Bldg. 3395 area to Bldg. 38 area. The second path adds 288 strands of fiber in a buried duct bank capable of supporting over 3000 strands of fiber from Bldg. 38 area to Bldg. 2 area. The payback period for this investment is 20 years.

**FY22 Lab Revitalization for Applied Energetic Device Innovation Lab – \$1,250 K (NSWC Crane; Crane, IN)** - The Specialized Munitions Division has performed electronic initiator and firing device workload for USSOCOM nearly thirty years. As both demand and technological advances are made in the electronics arena, Crane needs to also advance our capabilities. Current facilities have outgrown their usefulness in design and development, and with other explosive breaching prototype development work our facilities have reached capacity. The objective of this effort is to establish an Applied Energetic Device Innovation & Prototyping Lab that would allow for start to finish initiator prototype development – from initial inert prototyping to energetic loading. The required infrastructure and lab space to support this capability is currently available in B-364, which is shovel ready for revitalization to support this requirement. Once established, this facility would support on-going initiator/firing device research and development, rapid prototyping capability, test and evaluation, and rapid innovation for the Special Purpose Munitions (SPM) and USSOCOM community. NSWC transferred \$1,250K operating authority to contract authority; a process locally termed a “capital surcharge”, to execute this project in accordance with Title 10 U.S. Code 2363. It executes as a part of NSWC’s Naval Innovative Science and Engineering (NISE) program. The payback period for this investment is 3.2 years.

**FY22 SUW GMM MK-50 In-Service Engineering Facility (SWEF) – \$2,039K (NSWC Port Hueneme; Port Hueneme, CA)** - This facility will provide environmental protection required for a permanently installed LCS MK 50 Gun Mission Module at the SWEF for Logistical and Engineering lab use. The payback period for this investment is 1.4 years.

**FY22 MINCON Construct Storage Tank Conversion – \$2,850K (NSWC Carderock; Bethesda, MD)**– This project will convert underground storage tanks that have exceeded their service life and present an environmental and operational risk with above ground tanks to support the RDT&E of shipboard wastewater management systems and technologies. The payback period for this investment is 8 years.

**FY22 Energy Storage, Handling and Charging Facility – Building 820 – 1,553K – (NUWC Keyport)** – Project will modernize building 820 to support rapid growth in the number, size, and complexity of high-energy systems to power various undersea vehicles has generated considerable safety, environmental, and security concerns. Modernized facilities will be equipped with necessary safety, environmental, and security controls to support representative systems such as lithium batteries, lithium boilers, aluminum combustors, and hydrogen fuel cells.

**FY22 IMA Production Flow Improvements (Re-engineering) Phase 1 – Construction - \$3,920K – (NUWC Keyport)** – Phase 1 construction will focus on production layout improvements to maximize efficiency in throughput to ensure IMA capacity can support fleet demands. Without these improvements, the IMA will not be able to meet increasing demands for HWT & LWT torpedo production, R&D vehicle, and component testing.

**FY22 IMA Production Flow Improvements (Re-engineering) Phase 2 – Construction - \$1,098K – (NUWC Keyport)** – Phase 2 construction will relocate HWT and LWT processes while maintaining accessories/small components to be co-located within B489. Construction will include floor refinishing and other facility modifications to support enhanced productivity. These improvements are expected to increase output by eliminating waste between production areas and support a streamlined approach for production.

**FY22 IMA Production Flow Improvements (Re-engineering) Phase 3 – Construction - \$1,458K – (NUWC Keyport)** – Phase 3 construction will incorporate production flow improvements and develop a secluded R&D area for non-routine production operations including: component testing, R&D builds, and environmental testing for both LWT and HWT torpedoes. Construction will include floor refinishing and other facility modifications to support a LWT MK695 R&D dedicated unit.

**FY22 Building 1171 Upgrades – \$6,481K (NUWC Newport)** – Construct a 3740 square foot, single story area in Building 1171 to support classified work in the area of trainers, virtual worlds, and tactical combat systems.

**FY23 Optical Beam Characterization Lab (NRL)** – This lab will provide researchers the ability to study the effects that thermal perturbations in the atmosphere have on the optical beam quality as well as the laser energy field effects on the receiver. This lab will provide value to both the spacecraft engineering and Space Science divisions, as well as a number of others at the lab. The initial workload will most likely be a handful of experiments using the facility per year. It will also be an asset that can be marketed to other government agencies or contract companies for use. Lastly, but possibly the most significant benefit is that this facility will position the Naval Center for Space Technology to bring in future large scale space power beaming and optical communications projects.

**FY23 Pier 302 Facility Modernization (NIWC)** – This project will provide upgrades in the pier that supports both the Marine Mammal Program (MMP) and Unmanned Underwater Vehicle (UUV) systems with activities ranging from research and development to production. An economic analysis will be performed as part of the planning process, once the scope has been finalized and independent government estimate (IGE) has been validated by NAVFAC. Without this investment, the current activities at this pier will need to move causing impacts to other projects and piers. This is a NISE project.

**FY23 Keys and Codes Engineering Laboratory Modernization (NIWC)** – This replacement project in FY23 will upgrade a current the laboratory to a secure space housing key management system engineering and development. An economic analysis will be performed as part of the planning process, once the scope has been finalized and independent government estimate (IGE) has been validated by NAVFAC. Without this investment, there will be in inability to maintain critical key management systems, negatively impacting the warfighter secure communications.

**FY23 Topside Secure Space Modernization (NIWC)** - This replacement project in FY23 will provide upgrades in the laboratory space in the Topside area. An economic analysis will be performed as part of the planning process once the scope has been finalized an independent government estimate (IGE) has been validated by NAVFAC. Without this investment, our facilities may be unable to support Information Warfare lab requirements.

**FY23 Building 171 Common Submarine Radio Room (CSRR) Security Modernization (NIWC)** - This replacement project in FY23 will provide a new roof, exterior wall repair, HVAC system, Information Technology (IT) infrastructure, plumbing, lighting and electrical systems will be included, along with handicap accessibility throughout the building. Without this investment Command security requirements will not be met. This project is part of the LRP. This is a NISE project.

**FY23 Building 3113 Integrated Project Team (IPT) Engineering Space Renovation (NIWC)** - This replacement project in FY23 will replace electrical, communications and HVAC systems, as necessary, to improve and expand the facility. An economic analysis will be performed as part of the planning process. Without the investment, enhanced capabilities and improved productivity will not be realized. This project is part of the LRP. This is a NISE project.

**FY23 Building 3147 Room 1700 Open Secret Storage (OSS) Space (NIWC)** – This replacement project in FY23 will renovate and repurpose existing unclassified space as well as increase capabilities for a secure laboratory environment. Additionally, the project will provide structural upgrades required by the Unified Facilities Criteria (UFC). Without the upgrades, improved productivity and increased efficiency will go unrealized. This project is part of the LRP. This is a Naval Innovative Science and Engineering (NISE) project.

**FY23 Tactical Compute Networks Environment (TCNE) Laboratory Expansion (NIWC)** – This project in FY23 will increase laboratory space to support Tactical Networks Division’s requirement to develop, integrate and certify network systems for the Fleet. An economic analysis will be performed as part of the planning process once the scope has been finalized an independent government estimate (IGE) has been validated by NAVFAC. Without this investment, it will negatively impact the ability to deliver Information Warfare Dominance through secure and reliable networks. This project is part of the LRP.

**FY23 SECURE WEAPONS FACILITY LRP (NAWC)** – This project will construct a secure facility to perform RDT&E of environmentally sensitive, instrumented prototype weapons, and stores to support ground and flight testing of developmental air vehicle/weapon capabilities. This facility will satisfy Explosive Safety Program requirements, eliminate need for OP-5 waiver, and alleviate space conflicts. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY23 B8221 CAPABILITY EXPANSION (NAWC)** – This proposal will build an addition to Bldg. 8221, expanding the engineering and integration lab space to develop, deliver, and sustain electronic communications products. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY23 EXPEDITIONARY PROTOTYPING FACILITY #1 (NAWC)** - This proposal will construct a new facility to expand RDT&E lab space to develop, deliver, and sustain unmanned aircraft vehicle mission at NAWCAD. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY23 B509 Lab Reconfiguration Design– \$1,080K (NSWC Corona; Corona, CA)** – Design for a complete renovation of B509 to support the consolidation of multiple network support systems (CCRN and DREN), security and encryption. Project to centralize key network functions currently in multiple facilities across inner compound. The payback period for this investment is 20 years.

**FY23 B544 RM 1400/1300 Design– \$1,500K (NSWC Corona; Corona, CA)** – Current 1400 area secure spaces are overcrowded and do not have capacity to support expanding requirements. Adjoining 1300 area occupants will be relocated, providing opportunity to expand into an already secured compartmented facility. The payback period for this investment is 20 years.

**FY23 FB B204 Conversion– \$3,00K (NSWC Corona; Corona, CA)** – Renovating B204 to serve as a machine shop and storage for equipment located in Building 308 and 307 for RS Department. Upon completion of the renovation, equipment shall be relocated from B308 and 307 and placed in B204 according to building layout proposal. The payback period for this investment is 20 years.

**FY23 Desert Ship Roof Replacement – \$1,000K (NSWC Port Hueneme; Port Hueneme, CA)** - Replace existing Desert Ship roof with a new roof system and repair damage to the structure to include mold abatement. The existing roof has begun to have leaks in multiple areas of the facility causing interior damage. The payback period for this investment is 11 years.

**FY23 HVAC Chiller Upgrade B1388– \$5,100K (NSWC Port Hueneme; Port Hueneme, CA)** - Replaces HVAC chiller system that is reaching end of useful life. Chiller system supports climate control necessary for critical innovative ISEA lab to meet combat system development missions. Technical capability alignment: PH02, PH07 and PH10. NSWC transferred \$5,100K operating authority to contract authority; a process locally termed a “capital surcharge”, to execute this project in accordance with Title 10 U.S. Code 2363. It executes as a part of NSWC’s Naval Innovative Science and Engineering (NISE) program. The payback period for this investment is 11 years.

**FY23 Missile Assembly Facility (MAF) Roof Replacement– \$1,380K (NSWC Port Hueneme; Port Hueneme, CA)** - Replaces existing roof to prevent further interior damage to facility. The MAF is currently the primary Missile Assembly for missions that involve Standard Missiles (SM) Sm2, SM3, SM6 Block 1 and Block1A, BTAS, SM2 Block IIIC, TAC-Demo 5.1 and 5.2, Hyper Velocity Projectiles, 5 inch shells, sub-orbital missiles and future weapon systems for the Navy. Technical capability alignment: PH02, PH03, PH07, PH08, PH09 and PH11. The payback period for this investment is 12.2 years.

**FY23 MINCON Design/Construct SFOMF Storage Lab – \$3,600K (NSWC Carderock; Bethesda, MD)** – This project constructs a new 4,300 SF low-rise pre-engineered storage laboratory facility. It will be configured with two roll-up doors on the southern end of the building and four rows as standard warehouse racks with 12-foot aisles. This project will allow materials to be stored in a centralized, protected environment where it can be readily located, inventoried, and retrieved. In doing so, this project also frees the limited and otherwise-occupied laydown space across the Jetty Site for active use instead of storage. If not funded, materials will continue to be stored on exterior laydown space, leaving components and materials to corrode outside, reducing the lifecycle of materials and requiring personnel to shift materials around the Jetty Site to make use of limited laydown space. These factors significantly reduce efficiency of both personnel and materials, as well as extending project schedules. The payback period for this investment is 7.7 years.

**FY23 Building 3168 Renovation– \$1,010 K (NSWC Crane; Crane, IN)** - Currently the Advanced Sensor Technologies project (ASTPO) has been operating out of two areas located in 3330W and 3173. Both areas are built to ICD 705 standards. Consolidation of these spaces in 3168 will put Crane radar work in the Radar Technology Division (WXP) and free space in 3330W for work Airborne Electronic Attack (WXS) has that requires stricter security standards. This project greatly benefits both WXP and WXS. The payback period for this investment is 3.3 years.

**FY23 Crane Laboratory Infrastructure Network Communications (CLINCS) Phase V, Priority 9 – \$2,540 K (NSWC Crane; Crane, IN)** - The RDT&E Network provides advanced support of network hardware (i.e. DREN, SDREN, JMETS, NTN) and central management of IT Systems, enabling communications/collaboration with/by strategic customers and Warfighters. The key to enabling this capability is the availability of base fiber to connect systems across base. NSWC Crane is out of available fiber or critical low in the downtown area. This project is for adding 576 strands of fiber direct buried from Bldg. 2 area to Inert 479 area. The payback period for this investment is >20 years.

**FY23 Expeditionary Platform Test Range (EPTR)– \$1,000K (NSWC Crane; Crane, IN)** Build an Off-road Driving Course based on TOP-01-1-011A to support the research, development, and analysis of platform and integrated systems to test sensor and weapons stabilization, shake down, and performance evaluation to support the development of future sensor and weapon integrated systems. Course will require rough terrain, off-road (unimproved), trails, and link into Phase 1 (Jeep Trails). Utilized for Engineering Testing and Evaluation during development cycle prior to accreditation testing. The payback period for this investment is >2.2 years.

**FY23 GX B3334 Security Upgrades– \$2,050K (NSWC Crane; Crane, IN)** Modify existing unclassified office space into classified space to accommodate the increasing security posture detailed in the Security Class Guides (SCG) of multiple customers that NSWC Crane’s Global Deterrence and Defense (GX) Department supports. This includes converting approximately 7000 SF of B3334 into classified space (Open Storage Secret (OSS), SAP, TS/SCI) for cybersecurity engineering support. E244 would be converted to OSS with secret network infrastructure installation, requiring wall construction to isolate the space from the aisle and existing conference rooms. Within this space, a SAP and TS/SCI area (can be retrofitted) is required with offices and a collaboration/conference space with secret, SAP, and TS/SCI networks for data transfer and CVTC. The project would also include the installation of electronic security infrastructure. This project provides space where secret and sensitive information can be viewed, used, and discussed. Conversion of this space to OSS, SAP, and TS/SCI prevents unauthorized access to information and equipment, counters electronic surveillance, and suppresses data leakage. Any equipment required to support this project (ADPE or non-ADPE) would be funded by another source. The payback period for this investment is >0.2 years.

**FY23 "Collaboration, Integration and Lab MINCON, B1490 Addition – \$6,100K (NSWC Dahlgren; Dahlgren, VA)** - Project constructs a one-story, ~8K SF addition to B1490 to expand SCIF and OSS work spaces. There is a shortage of SCIF space to support collaboration for 80-100 persons and a shortage of OSS Integration and Laboratory spaces. There is a critical space deficiency for secure collaboration, integration and laboratory work space contributing to costly workarounds and negatively impacting productivity. Project will support various programs across NSWCDD. The payback period for this investment is 11.7 years.

**FY23 UxS Design & Innovation Center– \$5,459K (NSWC Panama City; Panama City, FL -** Conversion/upgrade of existing space in Bldg 147 to a collaborative space for UxV Systems Design and Innovation Center. The Center will include secure and unsecure office area, secure computer lab, and collaboration area for pre-mission briefs/hot-washes. This project will be completed in conjunction with renovations required due to Hurricane Michael (HM) impacts. The payback period for this investment is 9.5 years.

**FY23 Construct ATFP/Security Fencing/Barriers Bldg 87– \$7,200K (NSWC Philadelphia; Philadelphia, PA –** Security fencing and barriers required to meet DoD ATFP guidance from UFC 4-010-01 and Installation security guidance established by OPNAVINST 5530.14E. The payback period for this investment is 10 years.

**FY23 Construct ATFP/Security Fencing/Barriers Bldg 77H– \$7,200K (NSWC Philadelphia; Philadelphia, PA –** Security fencing and barriers required to meet DoD ATFP guidance from UFC 4-010-01 and Installation security guidance established by OPNAVINST 5530.14E. The payback period for this investment is 10 years.

**FY23 Modify LWT Torpedo Shop B894 – Phase 2 – \$5,000K (NUWC Keyport) –** Perform construction to upgrade B894 to support current and future work related to the SCEPS propulsion system weapons. Without this upgrade Keyport would be unable to support future weapons system production, turnaround, and depot level processing with current infrastructure.

**FY23 Building 3 Upgrades - \$1,694K – (NUWC Newport) -** Perform the construction to modernize Building 3 through infrastructure/safety features required to modernize the facility and provide future mission capability. Upgrades would include installation of a bridge crane, the widening of shipping doors, replacing flooring throughout, and providing running water to provide for hydro test stations and eye wash stations. These upgrades will provide for a safe and efficient means to move material throughout the building to support current and future test requirements.

**FY23 Electromagnetic Compatibility Laboratory Modernization - \$1,232K – (NUWC Newport) -** Perform the construction to modernize the EMC Chamber in the EMC laboratory to accommodate MIL-STD-461 testing of large systems such as UUVs, masts, and torpedoes. The modernization will double the working volume of the chamber and will provide a new capability for the laboratory. Without the modernization, the EMC Chamber will not be able to qualify medium to large sized systems under MIL-STD-461G due to not having the adequate working volume.

**FY24 Backup Generator Bldg A47 (NRL) -** creates a resolution to a need 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 project in addition gives all research programs which rely on adequate conditioned environments a much needed upgrade, which range from all computer/server rooms to laboratories and administrative spaces.

**FY24 Keys and Codes Engineering Laboratory Modernization (NIWC) –** This replacement project in FY24 will upgrade a current the laboratory to a secure space housing key management system engineering and development. This project will fill a critical cyber laboratory deficit. An economic analysis will be performed as part of the planning process, once the scope has been finalized. An independent government estimate (IGE) has been validated by NAVFAC. Without this investment, there will be inability to maintain critical key management systems, negatively impacting the warfighter secure communications.

**FY24 Topside Secure Lab Modernization (NIWC) –** This replacement project in FY24 will provide upgrades in the laboratory space in the Topside area. An economic analysis will be performed as part of the planning process once the scope has been finalized. An independent government estimate (IGE) has been validated by NAVFAC. Without this investment, our facilities may be unable to support Information Warfare lab requirements.

**FY24 Building 198 Expeditionary Warfare (EXW)/5.2 Communications (Comms) & Information Technology (IT) Collaboration Space (NIWC) –** This replacement project in FY24 will transition the space to include formal and informal work space to support a more interactive, collaborative and flexible engineering facility. Additionally, there will be upgrades to the fire protection system, HVAC, electrical and Information Technology (IT) infrastructure. An economic analysis will be performed as part of the planning process. Without this investment, engineering transition and productivity will be negatively impacted. This is a NISE project.

**FY24 Building 198 Manufacturing Innovation Area (NIWC)** – This replacement project in FY24 will renovate the space to quickly deploy interoperable command, control, communications, intelligence, surveillance, cyber and information technology capabilities throughout the Department of Defense. Additionally, the space will include high power requirements, electrical filtration and exhaust systems. An economic analysis will be performed as part of the planning process. Without this investment, the required high power requirements needed to support the proper function of ODM equipment will not be available. This project is part of the LRP

**FY24 Tactical Compute Networks Environment (TCNE) Laboratory Expansion (NIWC)** – This project in FY24 will increase laboratory space to support Tactical Networks Division’s requirement to develop, integrate and certify network systems for the Fleet. An economic analysis will be performed as part of the planning process. Without this investment, it will negatively impact the ability to deliver Information Warfare Dominance through secure and reliable networks. This is a NISE project.

**FY24 Indoor Small Autonomous Unmanned Systems Research (SAUSR) Range (NIWC)** – This project in FY24 provides a 6,600 square foot new climate controlled facility supporting Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) and Cyber Systems and Defense Advanced Research Projects Agency (DARPA) test requirements. The indoor facility will support Unmanned Aerial Vehicle/Unmanned Autonomous System (UAV/UAS) test, conduct laboratory experiments designed to explore the operational utility of new and emerging technologies in UASs and Robotics. Current projects such as Advanced Communication Systems (ACS) within mobile wireless networks, Command guided drone swarms /robotic augmentation as well as unmanned ground systems with networked squad support interfaces will also benefit from this facility. The facility will also be used to provide support capabilities for mobile C4I system testing and vehicle integration efforts. No facility currently has the ability to provide indoor Research Development Test and Evaluation (RDT&E) space to support vehicle On-The-Move systems demonstration and integration, UAVs/UASs/Robotics operations or any large systems testing in a controlled environment. An economic analysis will be performed as part of the planning process. Without this investment, there will be no facility that can support controlled environment testing of large systems UAV’s/UAS’s. This project is part of the LRP. This is a NISE project.

**FY24 POINT MUGU COMMAND SCIF (NAWC)** - This investment expands the Main SCIF in Point Mugu from 2468 SqFt to 4550 SqFt, utilizing space currently occupied by the Scientific and Technical Intelligence Liaison Office (STILO) function in an adjacent secure collateral space. The STILO function will be retained in a smaller collateral space and within the expanded SCIF. The construction will retrofit all space to meet ICD-705 standards. With increasing demand for SCIF facilities to support new and on-going work, current Point Mugu facilities are fully utilized and many times (daily) customers/WD workforce are forced to re-schedule or find an alternative work around. Point Mugu has 2 SCIFs (main SCIF in 3008, and a program SCIF in 3015.) Current demand in PM main SCIF exceeds capacity. This project is under the LRP Authority of not to exceed \$6M.

**FY24 VISION 2041 IMMERSIVE SPACE (NAWC) –**

Space Requirements:

- Vision 2041 immersive screening room with wide format movie screen.
- Accommodate up to 30 participants.
- Showcase current technologies and warfighter imperative briefings
- Specialty conference room – bridge to labs and NAWCWD relevant spaces
- Specialized VTC space
- Creative Meeting / Ideation Space

Full Spectrum sensory experience augmented by

- Interactive lighting
- Spatial Speaker Array
- Actuators to create a ‘rumble floor’
- Specialty ceiling fans for wind effects
- AI enabled Natural Language Processing

This project is under the LRP Authority of not to exceed \$6M.

**FY24 MINCON PLANNING AND DESIGN (NAWC)** - MINCON Planning and Design will fund the design for NAWCAD construction projects. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 EXPEDITIONARY PROTOTYPING FACILITY #2 (NAWC)** - This proposal will construct a new facility to expand RDT&E lab space at NAWCAD. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 PROTOTYPE ADDITIVE MANUFACTURING (AM) LRP (NAWC)** - This project will construct additional space that will allow for one larger collaborative space for the entire prototype, additive manufacturing, reverse engineering, and manufacturing technology teams. The constructed space will be a high bay area which will allow for larger sized equipment and crane support. This project will provide an enhanced prototype environment which will improve workflow and shorten cycle times by developing a collaborative space for the design and test engineers with the artisans manufacturing and inspecting the parts. The single shared space will create more efficient workflow paths leading to reduced turnaround time on both engineering developed solutions and urgent Fleet requirements. Alternatives have been considered, however, this project is the most cost effective solution for the government.

**FY24 Lab Revitalization for Applied Energetic Device Innovation Lab – \$2,557K (NSWC Crane; Crane, IN)** - The Specialized Munitions Division has performed electronic initiator and firing device workload for USSOCOM nearly thirty years. As both demand and technological advances are made in the electronics arena, Crane needs to also advance our capabilities. Current facilities have outgrown their usefulness in design and development, and with other explosive breaching prototype development work our facilities have reached capacity. The objective of this effort is to establish an Applied Energetic Device Innovation & Prototyping Lab that would allow for start to finish initiator prototype development – from initial inert prototyping to energetic loading. The required infrastructure and lab space to support this capability is currently available in B-364, which is shovel ready for revitalization to support this requirement. Once established, this facility would support on-going initiator/firing device research and development, rapid prototyping capability, test and evaluation, and rapid innovation for the Special Purpose Munitions (SPM) and USSOCOM community. The payback period for this investment is 6.5 years.

**FY24 Desert Ship Fence Replacement– \$1,900K (NSWC Port Hueneme; Port Hueneme, CA)** - Replaces deteriorated Desert Ship compound fence and gates to prevent unrestricted access to wildlife and personnel. The LLS-1 Desert Ship is currently the primary launch control building for all missions that involve SM6 Block 1 and Block1A, BTAS, SM2 Block IIIC, TAC-Demo 5.1 and 5.2, and AEGIS. Technical capability alignment: PH02, PH03, PH07, PH08, PH09 and PH11. The payback period for this investment is 18.2 years.

**FY24 N237 Fire Suppression Replacement– \$1,091K (NSWC Port Hueneme; Port Hueneme, CA)** - Replace current fire suppression system at SULF site, building N237, on WSMR. SULF site is a launch point used by the Navy. The primary purpose of this location is to support various target launch missions, such as IWS 3, SM6, Patriot, Coyote, AADI, NIFCA, and future special project missions. The Missile Assembly Building at SULF currently uses a Halon fire suppression system that is no longer authorized for use. Should the fire suppression system discharge, it will render this building unusable and no ordnance operations could be conducted. The payback period for this investment is 14 years.

**FY24 MINCON Design Olney Shock Testing Support Facility– \$1020K (NSWC Carderock; Bethesda, MD)** - This project design would construct a 50,000 sqft warehouse at the Olney Facility as a replacement for the current warehouse being leased in Perryville, MD. This warehouse would support test preparations for future shock trials, it would support large vehicle shock testing at Aberdeen Proving Grounds and would support a multitude of other shock tests that are conducted at other government and commercial facilities around the country. If the facility is not funded then the lease at Perryville will need to be extended to continue support of shock testing. If the lease is not extended then NSWCCD will not be able to support large shock test programs like shock trials and large Vehicle Shock Testing that occurs at Aberdeen Proving Ground and there will be very limited capability to support smaller shock test programs. Additionally, current equipment would need to be moved to another alternative location located near Aberdeen or NSWC Carderock to support testing at these locations. The payback period for this investment is 6 years.

**FY24 B544 RM 1400/1300 Reconfigure and Construction– \$4,480K (NSWC Corona; Corona, CA)** – Current 1400 area secure spaces are overcrowded and do not have capacity to support expanding requirements. Adjoining 1300 area occupants will be relocated, providing opportunity to expand into an already secured compartmented facility. NSWC transferred \$400K operating authority to contract authority; a process locally termed a “capital surcharge”, to execute this project in accordance with Title 10 U.S. Code 2363. It executes as a part of NSWC’s Naval Innovative Science and Engineering (NISE) program. The payback period for this investment is 20 years.

**FY24 Crane Laboratory Infrastructure Network Communications (CLINCS) Phase VI– \$2,529K (NSWC Crane; Crane, IN)** - The RDT&E Network provides advanced support of network hardware (i.e. DREN, SDREN, JMETC, NTN) and central management of IT Systems, enabling communications/collaboration with/by strategic customers and Warfighters. The key to enabling this capability is the availability of base fiber to connect systems across base. NSWC Crane is out of available fiber or critically low along the HWY-5 technical corridor, the Radiation Modernization area, and the Small Arms area. This project is for adding 576 (4 - 144) strands of fiber direct buried from Building 480 area to the intersection of HWY-5 and HWY-331 and then install a fiber feed to the Radiation Modernization area (Building 3059 area). The payback period for this investment is >20 years.

**FY24 Virtual MBSE Capability – \$2,519K (NSWC Crane; Crane, IN)** - The collaborative model-based and digital engineering office and virtualized laboratory spaces, coupled with Mission Engineering Analysis and digital validation and verification for experimentation will provide rapid solutions and prototyping capability. The proximity to the current LVC Operations Center will allow electromagnetic warfare integrated with HWIL across the country. Outputs will range from Warfighting CONOPs, TTPs, to prototype solutions. Some of this workload will require space within the TS/SCI/SAP space. The payback period for this investment is 0.9 years.

**FY24 Substation 1 Upgrade– \$3,250K (NSWC Dahlgren; Dahlgren, VA)** - "Provide 5 MVA secondary unit substation, 15KV SF-6 pad mount switch, 4000 Amps of 480/277 voltage and 2000 Amps of 208/120 voltage to BLDG 213/297/198/199/200 campus from substation 1. Designs for the Substation 1 upgrade are currently being generated using CIP funds and are expected to be completed by the end of March FY22 to support this proposal. Provide 5 MVA secondary unit substation, 15KV SF-6 pad mount switch, 4000 Amps of 480/277 voltage and 2000 Amps of 208/120 voltage to BLDG 213/297/198/199/200 campus from substation 1. Designs for the Substation 1 upgrade are currently being generated using CIP funds and are expected to be completed by the end of March FY22 to support this proposal. Provide 5 MVA secondary unit substation, 15KV SF-6 pad mount switch, 4000 Amps of 480/277 voltage and 2000 Amps of 208/120 voltage to BLDG 213/297/198/199/200 campus from substation 1. Designs for the Substation 1 upgrade are currently being generated using CIP funds and are expected to be completed by the end of March FY22 to support this proposal." The payback period for this investment is 3.7 years.

**FY24 Substation 4 Upgrade– \$2,900K (NSWC Dahlgren; Dahlgren, VA)** - NSWCDD requires additional electrical capacity from substation 4 to support an increase in electrical capacity/reliability to serve NSWCDD buildings and test sites based upon current and future electrical demands. Project provides upgrades to electrical infrastructure and distribution lines to required areas. The project will facilitate various necessary test efforts, including multiple degree-of-freedom vibration testing of Laser Weapons Systems (LWS) in a representative over-water environment. The payback period for this investment is 2.7 years.

**FY24 Diving & Life Support Rapid Response Facility– \$2,900K (NSWC Panama City; Panama City, FL)** - This project modifies Bldg. 543 by adding a specially configured mezzanine to: 1) Enhance our present ability to rapidly respond to current fleet diving needs; and 2) Better equip us to support the future needs of the Diving and Life Support (D&LS) community. This project adds: 1607 ft2 of office space. The payback period for this investment is 6.2 years.

**FY24 Construct ATFP/Security Fencing/Barriers Bldg 1000– \$7,200K (NSWC Philadelphia; Philadelphia, PA)** – Security fencing and barriers required to meet DoD ATFP guidance from UFC 4-010-01 and Installation security guidance established by OPNAVINST 5530.14E. The payback period for this investment is 10 years.

**FY24 Construct ATFP/Security Fencing/Barriers Bldg 77L– \$7,200K (NSWC Philadelphia; Philadelphia, PA)** – Security fencing and barriers required to meet DoD ATFP guidance from UFC 4-010-01 and Installation security guidance established by OPNAVINST 5530.14E. The payback period for this investment is 10 years.

**FY24 Engineering & Weapon System Development Laboratory– \$6,195K (NSWC Port Hueneme; Port Hueneme, CA)** - Construct a 6,650SF open-secret Engineering and Weapon System Development Laboratory to correct existing laboratory space deficiencies. NSWC PHD is the ISEA for the Common Network Processing and Storage (NPS) and Consoles, Displays, and Peripherals (CDP), and the Gun Weapon System (GWS). New versions of these based on the TI16 MOD 1 & TI16 MOD 2 versions of equipment are expected to be fielded by the USN. There is currently no lab space to install versions of this equipment at NSWC PHD, and no systems that will retire in the near term that would free up space. The payback period for this investment is 10 years.

**FY24 IMA Deep Sink (Re-engineering) – Construction - \$4,560K – (NUWC Keyport)** – Phase 2 construction will replace the flexible ventilation trunks located in B514 with approved ventilation hoods designed for OTTO fuel processing. In addition, the ventilation controls and motors will be upgraded to allow for better control and management of the system to ensure sufficient ventilation is achieved.

**FY24 Payload Module Integration Facility Modernization - \$1,500K – (NUWC Newport)** - Perform the construction to modernize the Payload Module Integration Facility through infrastructure/safety features required to modernize the facility and provide future mission capability. Upgrades would include installation of an engineering space, the reinforcement of the mezzanine, and the installation of stairway for safety purposes.

**CAPITAL BUDGET EXECUTION  
DEPARTMENT OF THE NAVY  
RESEARCH AND DEVELOPMENT  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

FY	Line Item	Category	Capability/Project	Initial Request	Current Proj Cost	Approved Change	Explanation
2022	1	Non ADP		\$58.573	\$63.811	\$5.238	
			Vehicles	\$0.000	\$1.200	\$1.200	Funding Adjusted; projects reprioritized
			Material Handling	\$0.590	\$0.624	\$0.034	Funding Adjusted; projects reprioritized
			Installation Security	\$0.650	\$0.000	(\$0.650)	Funding Adjusted; projects reprioritized
			Quality Control/Testing	\$19.559	\$23.017	\$3.458	Funding Adjusted; projects reprioritized
			Machinery	\$2.644	\$2.644	\$0.000	Funding Adjusted; projects reprioritized
			Support Equipment	\$35.130	\$36.326	\$1.196	Funding Adjusted; projects reprioritized
	2	ADP		\$34.761	\$31.446	(\$3.315)	
			Computer Hardware (Production)	\$9.775	\$10.662	\$0.887	Funding Adjusted; projects reprioritized
			Computer Hardware (Network)	\$11.674	\$10.055	(\$1.619)	Funding Adjusted; projects reprioritized
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$7.536	\$4.605	(\$2.931)	Funding Adjusted; projects reprioritized
			Other Support Equipment	\$5.776	\$6.124	\$0.348	Funding Adjusted; projects reprioritized
	3	Software		\$1.505	\$3.055	\$1.550	
			Internally Developed	\$0.530	\$0.000	(\$0.530)	Funding Adjusted; projects reprioritized
			Externally Developed	\$0.975	\$3.055	\$2.080	
	4	Minor Construction		\$107.026	\$99.238	(\$7.788)	
			Replacement	\$21.271	\$24.171	\$2.900	Funding Adjusted; projects reprioritized
			New Construction	\$83.360	\$72.217	(\$11.143)	Funding Adjusted; projects reprioritized
			Environmental Capability	\$2.395	\$2.850	\$0.455	Funding Adjusted; projects reprioritized
<b>TOTAL 2022 CIP Program</b>				<b>\$201.866</b>	<b>\$197.550</b>	<b>(\$4.316)</b>	
FY	L.I.	Category	Capability/Project	I.R.	C.P.R.	A.C.	Explanation
2023	1	Non ADP		\$68.441	\$69.204	\$0.763	
			Vehicles	\$1.200	\$0.000	(\$1.200)	Funding Adjusted; projects reprioritized
			Material Handling	\$0.300	\$3.200	\$2.900	Funding Adjusted; projects reprioritized
			Installation Security	\$3.500	\$0.000	(\$3.500)	Funding Adjusted; projects reprioritized
			Quality Control/Testing	\$18.189	\$21.003	\$2.814	Funding Adjusted; projects reprioritized
			Machinery	\$5.300	\$2.456	(\$2.844)	Funding Adjusted; projects reprioritized
			Support Equipment	\$39.952	\$42.545	\$2.593	Funding Adjusted; projects reprioritized
	2	ADP		\$18.401	\$23.779	\$5.378	
			Computer Hardware (Production)	\$6.534	\$7.909	\$1.375	Funding Adjusted; projects reprioritized
			Computer Hardware (Network)	\$9.771	\$9.500	(\$0.271)	Funding Adjusted; projects reprioritized
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	Funding Adjusted; projects reprioritized
			Telecommunications	\$0.776	\$1.189	\$0.413	Funding Adjusted; projects reprioritized
			Other Support Equipment	\$1.320	\$5.181	\$3.861	Funding Adjusted; projects reprioritized
	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		\$107.478	\$106.437	(\$1.041)	
			Replacement	\$27.611	\$32.875	\$5.264	Funding Adjusted; projects reprioritized
			New Construction	\$79.867	\$73.562	(\$6.305)	Funding Adjusted; projects reprioritized
			Environmental Capability	\$0.000	\$0.000	\$0.000	
<b>TOTAL 2023 CIP Program</b>				<b>\$194.320</b>	<b>\$199.420</b>	<b>\$5.100</b>	
FY	L.I.	Category	Capability/Project	I.R.	C.P.R.	A.C.	Explanation
2024	1	Non ADP		\$32.501	\$63.489	\$30.988	
			Vehicles	\$0.000	\$0.000	\$0.000	
			Material Handling	\$0.600	\$0.600	\$0.000	
			Installation Security	\$0.000	\$0.000	\$0.000	
			Quality Control/Testing	\$13.740	\$27.567	\$13.827	
			Machinery	\$0.000	\$0.900	\$0.900	
			Support Equipment	\$18.161	\$34.422	\$16.261	
	2	ADP		\$18.041	\$34.531	\$16.490	
			Computer Hardware (Production)	\$6.719	\$10.719	\$4.000	
			Computer Hardware (Network)	\$8.025	\$18.415	\$10.390	
			Computer Software (Operating)	\$0.000	\$0.000	\$0.000	
			Telecommunications	\$0.000	\$0.000	\$0.000	
			Other Support Equipment	\$3.297	\$5.397	\$2.100	
	3	Software		\$0.000	\$2.103	\$2.103	
			Internally Developed	\$0.000	\$1.108	\$1.108	
			Externally Developed	\$0.000	\$0.995	\$0.995	
	4	Minor Construction		\$60.969	\$132.339	\$71.370	
			Replacement	\$20.761	\$33.159	\$12.398	
			New Construction	\$40.208	\$99.180	\$58.972	
			Environmental Capability	\$0.000	\$0.000	\$0.000	
<b>TOTAL 2024 CIP Program</b>				<b>\$111.511</b>	<b>\$232.462</b>	<b>\$120.951</b>	

SOURCES OF NEW ORDERS & REVENUE  
DEPARTMENT OF THE NAVY  
RESEARCH AND DEVELOPMENT  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)

	FY 2022 -----	FY 2023 -----	FY 2024 -----
1. New Orders	17,441.9	18,216.6	18,935.2
a. Orders from DoD Components:	15,365.3	16,075.8	16,700.6
Department of the Navy	13,119.3	13,806.1	14,278.5
O & M, Navy	3,638.9	4,243.4	4,481.4
O & M, Marine Corps	222.8	149.2	156.4
O & M, Navy Reserve	46.8	39.4	40.0
O & M, Marine Corp Reserve	0.7	2.2	2.3
Aircraft Procurement, Navy	1,129.3	1,391.5	1,404.0
Weapons Procurement, Navy	302.1	269.9	294.2
Ammunition Procurement, Navy/MC	96.9	96.1	99.5
Shipbuilding & Conversion, Navy	822.7	835.4	832.2
National Sea Base Deterrence Fund	90.9	43.7	46.4
Other Procurement, Navy	1,890.2	1,648.6	1,652.1
Procurement, Marine Corps	104.0	160.0	154.2
Family Housing, Navy/MC	0.9	1.4	1.5
Research, Dev., Test, & Eval., Navy	4,736.3	4,906.5	5,095.2
Military Construction, Navy	0.3	2.6	1.1
National Defense Sealift Fund	0.1	0.8	0.8
Foreign Cooperative Projects, Navy	37.0	13.4	14.8
Other Navy Appropriations	2.5	2.0	2.3
Other Marine Corps Appropriations	0.0	0.0	0.0
Department of the Army	236.2	283.8	293.7
Army Operation & Maintenance	74.1	104.4	106.3
Army Res, Dev, Test, Eval	108.9	90.0	93.6
Army Procurement	51.6	73.2	77.5
Army Other	1.7	16.1	16.4
Department of the Air Force	613.6	735.3	763.5
Air Force Operation & Maintenance	141.4	184.4	194.3
Air Force Res, Dev, Test, Eval	296.4	307.2	315.1
Air Force Procurement	132.5	217.6	226.7
Air Force Other	43.3	26.0	27.4
DOD Appropriation Accounts	1,396.2	1,250.6	1,364.8
Base Closure & Realignment	0.3	1.0	1.0
Operation & Maintenance Accounts	250.5	263.3	272.8
Res, Dev, Test & Eval Accounts	835.8	699.6	740.1
Procurement Accounts	177.3	153.0	158.7
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	132.4	133.6	192.1
b. Orders from other Fund Activity Groups	721.8	790.1	804.3
c. Total DoD	16,087.1	16,865.9	17,504.9
d. Other Orders:	1,351.9	1,350.7	1,430.3
Other Federal Agencies	479.2	480.7	514.5
Foreign Military Sales	739.1	721.6	752.1
Non Federal Agencies	133.6	148.3	163.8
2. Carry-In Orders	8,467.4	8,714.9	8,897.5
3. Total Gross Orders	25,906.4	26,931.5	27,832.8
a. Funded Carry-Over before Exclusions	8,714.9	8,897.5	8,694.6
4. Revenue(-)	17,191.5	18,033.9	19,138.2
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	447.3	447.8	451.0
7. Funded Carryover	1,208.6	1,246.3	1,272.5

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

**REVENUE AND EXPENSES  
DEPARTMENT OF THE NAVY  
RESEARCH AND DEVELOPMENT  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	17,049.5	17,829.9	18,899.6
Capital Surcharges	49.2	25.1	46.0
Capital Investment Recovery	103.8	179.0	192.6
Other Income			
Total Income	17,202.6	18,033.9	19,138.2
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	49.0	44.4	46.7
Civilian Personnel Compensation & Benefits	9,431.3	9,745.1	10,177.6
Travel and Transportation of Personnel	258.9	286.6	290.6
Material & Supplies (Internal Operations)	1,352.4	1,361.1	1,364.8
Equipment	637.3	514.4	521.7
Other Purchases from NWCF	463.5	404.1	414.7
Transportation of Things	42.6	35.3	35.8
Capital Investment Recovery	103.8	179.0	192.6
Printing and Reproduction	2.0	3.1	3.2
Advisory and Assistance Services	198.5	56.2	54.6
Rent, Communication, Utilities & Misc Charges	370.0	352.3	356.8
Other Purchased Services	4,176.8	5,170.2	5,393.4
Total Expenses	17,086.2	18,151.8	18,852.4
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	-0.5	0.0	0.0
Cost of Goods Sold	17,085.7	18,151.8	18,852.4
Operating Result	116.9	-117.8	285.8
Adjustments Affecting NOR	-53.4	-25.1	-46.0
Capital Surcharges	-49.2	-25.1	-46.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	-4.2	0.0	0.0
Net Operating Result	67.7	-142.9	239.8
PY AOR	158.2	207.8	64.8
TOTAL AOR	221.7	64.8	304.6
Deferred Adjustments impacting AOR	-12.0	0.0	-304.6
AOR for budget purposes	209.7	64.8	0.0

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## 4. Transportation

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**TRANSPORTATION – MILITARY SEALIFT COMMAND**  
**FISCAL YEAR (FY) 2024 PROGRAM / BUDGET ESTIMATES**  
**MARCH 2023**

**Mission Statement / Overview:**

The Military Sealift Command (MSC) comprises the NWCF's transportation business and is the single manager-operating agency for sealift services. The primary focus of MSC includes over-ocean movement of supplies and provisions to the deployed operating forces, and maintaining prepositioned equipment and supplies. These services combine to support the Department of the Navy (DON) in deterring potential threats and promptly responding to crises in the maritime crossroads. MSC provides support to Naval Fleet Commanders and Department of Defense (DoD) activities by providing unique vessels and programs. MSC evaluates mission performance by measuring readiness of ships and crews as well as interoperability with the Fleet and joint forces.

**Activity Group Composition:**

MSC supports the United States Pacific Fleet, the U.S. Fleet Forces Command, the Naval Sea Systems Command, the Naval Information Warfare Systems Command, the Strategic Systems Programs, the Naval Special Warfare Command, Missile Defense Agency, the U.S. Air Force, and various other customers with unique vessels.

The four programs budgeted through the Navy Working Capital Fund (NWCF) are:

**Combat Logistics Force (CLF):** Provides support utilizing civilian mariner manned non-combatant ships for material support including underway replenishment, commercial helicopter services and other direct fleet support to Navy ships worldwide.

**Special Mission Ships (SMS):** Provides unique seagoing platforms, which support specialized scientific and technical missions for DoD sponsors. Missions include ocean surveillance, oceanographic survey, cable laying, missile telemetry collection, submarine support and navigation test support.

**Afloat Prepositioning Force-Navy (APF-N):** Deploys advance material for strategic lifts and at-sea staging around the world for the U.S. Navy and Marine Expeditionary Forces. This program also contains the Expeditionary Transfer Dock (ESD) and Expeditionary Sea Base (ESB) ship classes, which are highly flexible platforms, utilized across a broad range of military operations supporting the deployment and sustainment of forces and prepositioned supplies and equipment.

**Service Support Ships (SSS):** Provides the Navy with towing, rescue and salvage, submarine support, floating medical facilities, as well as the Navy's 6<sup>th</sup> Fleet Flagship. Also included are Expeditionary Fast Transports (EPF), which provide rapid, intra-theater transport of conventional, or Special Forces and military equipment and supplies. Support ships include Fleet Ocean Tugs, Rescue and Salvage Ships, Hospital Ships, Submarine

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Tenders, Command Ship, High Speed Transport Vessels, the contracted Harbor Tugs and Tows, and Motor Vessels (MVs).

**Significant Changes since the FY2023 President’s Budget:**

**CLF** – USNS ROBERT F KENNEDY (T-AO 208) is being delivered in FY 2025. Funding for maintenance increased to buy down the backlog and reduce readiness risk.

**APF-N** – Funding for the USNS WHEELER (T-AG 5001) increased by \$7.9M in support of maintenance and repairs that will be completed on the West Coast as opposed to overseas due to the ship being placed in Reduced Operating Status (ROS). Funding for USNS JOHN GLENN (ESD-1) in the amount of \$21.4M shifts decommission from FY 2023 to FY 2024. Funding for USNS MONTFORD POINT (ESD-2) in the amount of \$19.5M shifts decommission from FY 2023 to FY 2024. USNS ROBERT E SIMANEK (ESB 7) delivery moved from January 2024 to June 2024.

**SSS** – The following T-ATs and EPF will no longer be delivered in FY 2024: USNS NAVAJO (T-ATS 6), USNS CHEROKEE NATION (T-ATS 7), USNS SAGINAW OJIBWE ANISHINABEK (T-ATS 8), USNS LENNI LENOPE (T-ATS 9), and POINT LOMA (EPF 15).. As a result of T-ATs delivery delays, USNS CATAWBA (T-ATF 168) and USNS GRASP (T-ARS 51) decommissioning are delayed beyond FY 2024. HOS DOMINATOR lease, previously scheduled to end in FY 2023, has been extended through FY 2024. The USNS MERCY (T-AH 19) Full Operating Status (FOS) days increased from 75 to 140 days and Reduced Operating Status (ROS) decreased from 291 to 226 days with associated overall increase in operational funding. Maintenance and repair funding increased by \$19M for the USNS MERCY (T-AH 19) in FY 2024 to support two Voyage Repair (VR) periods and one Midterm Availability (MTA).

**Financial Profile:**

<b><u>Orders/Revenue/Expense/Operating Results (\$Millions):</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
Orders	\$3,733.5	\$3,840.7	\$3,854.9
Revenue	\$3,666.0	\$3,840.6	\$3,854.8
Expense	<u>\$3,669.5</u>	<u>\$3,910.3</u>	<u>\$3,979.7</u>
Operating Results	(\$3.4)	(\$69.7)	(\$124.9)
Capital Surcharge	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>
Net Operating Results (NOR)*	(\$3.4)	(\$69.7)	(\$124.9)
Prior Year AOR*	\$730.0	\$96.7	\$27.0
Other Changes Affecting AOR	(\$629.9)	(\$0.0)	\$97.9
Accumulated Operating Results (AOR)*	<u>\$96.7</u>	<u>\$27.0</u>	<u>0</u>

*Some totals may not add due to rounding.*

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**Orders, Revenue and Expense:** The variations in revenue and expense from year-to-year are associated with the changes to the ship fleet..

**Net Operating Result (NOR):** The FY 2024 current estimate of \$27M includes Prior Year AOR and deferred cost changes have been incorporated, recovered or have a neutral impact on the FY 2024 rates. FY 2024 changes to AOR represent anticipated customer demand (revenue).

<b><u>Disbursements/Collections/Outlays (\$Millions)</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
Disbursements	\$3,669.4	\$3,747.9	\$3,998.2
Collections	\$3,666.0	\$3,840.6	\$3,854.8
Outlays	(\$3.4)	\$92.7	(\$143.3)

*Some totals may not add due to rounding.*

<b><u>Workload:</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
CLF	11,526	11,759	11,637
SMS	7,300	6,935	6,954
APF-N	6,266	5,840	5,964
SSS	8,547	9,358	9,150

Workload for MSC refers to the number of per diem days associated with each of the four MSC programs.

<b><u>Reimbursable Orders (\$ Millions):</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
Current Estimate	\$3,666.0	\$3,840.6	\$3,854.8

Orders for MSC equate to revenue. Variances are due to changes in per diem days, fuel price changes, and requirement to attain zero AOR in FY 2024.

<b><u>Direct Labor Hours (000):</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
Current Estimate	18,383	18,207	18,205

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

The decrease in Direct Labor Hours from FY 2023 to FY 2024 is due to projected decrease in workload.

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**Performance Indicators:** Program Performance is measured by ship availability days comparing actual days that ships are ready for tasking (available to perform the function for which they were intended) against planned ship days. Any change in ship operations, such as Full Operating Status (ready to deploy or deployed) to Reduced Operating Status (e.g. ROS-15, ROS-30 or ROS-45 day), or moving or transiting ships temporarily or permanently between various locations both CONUS and OCONUS, is coordinated in collaboration with the respective MSC customer.

<b><u>Unit Cost:</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
CLF	\$151,532	\$156,019	\$181,466
SMS	\$55,762	\$55,873	\$60,028
APF-N	\$88,749	\$72,336	\$79,563
SSS	\$73,342	\$72,507	\$78,627

**Unit Cost:** MSC operates under four distinct unit cost goals - one for each of its 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 inventory levels by ship class and ship availability status including FOS, ROS, deployment or undergoing shipyard Maintenance and Repair impacts unit cost levels. Costs in all years are primarily a function of approved escalation, fuel, Civilian Mariner salaries, and Maintenance and Repair.

<b><u>Performance Rate Change from Prior Year:</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
CLF	-7.3%	4.8%	3.9%
SMS	-9.9%	-9.0%	9.4%
APF-N	-22.6%	3.5%	9.0%
SSS	-19.6%	11.3%	-2.3%

*\*Rates in the Unit Cost section reflect the latest Operational Tempo and Economic Assumptions*

The change in rate percentages reflect the change in unit cost from year to year and reflect changes in ship inventory by ship class and availability.

**Staffing:**

**Narrative**

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<b><u>Civilian/Military ES &amp; Workyears:</u></b>	<b><u>FY2022</u></b>	<b><u>FY2023</u></b>	<b><u>FY2024</u></b>
Civilian End Strength	6,959	7,192	7,167
Civilian Workyears (straight time)	6,785	6,919	6,937
Military End Strength	165	167	167
Military Workyears	165	167	167

**Civilian Personnel:** End Strength changes are mainly due to new ships coming on and off line. The decrease in End Strength in FY 2024 is due to ships moving between ROS and FOS and delivery delays.

**Military Personnel:** Military End Strength stays the same from FY2023 to FY2024.

**CHANGES IN THE COSTS OF OPERATIONS  
DEPARTMENT OF THE NAVY  
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(DOLLARS IN MILLIONS)**

	<u>Costs</u>
FY 2022 Actuals	3,669.5
FY 2023 President's Budget:	3,474.0
Estimated Impact in FY23 of FY22 Experience:	0.0
Pricing Adjustments:	0.0
Civilian Personnel	0.0
Fuel Price	0.0
Program Changes:	436.3
Operational Tempo	315.9
Restore ESD John Glenn and Montford Point	54.0
Operations Supporting Ukraine	66.4
Capital Investment Recovery	0.0
Facilities Sustainment, Restoration & Modernization	0.0
Other (list)	0.0
FY 2023 Current Estimate:	3,910.3
Pricing Adjustments:	106.2
Annualization of Prior Year Pay Raises	0.0
Civilian Personnel	0.0
Military Personnel	0.0
FY 2024 Pay Raise	22.8
Civilian Personnel	22.8
Military Personnel	0.0
Fuel Price Changes	100.9
General Purchase Inflation	-17.5
Other Price Changes (list)	0.0
Working Capital Fund Price Changes	0.0
Productivity Initiatives and Other Efficiencies:	0.0
Program Changes:	-36.8
Operational Tempo	-36.8
FY 2024 Estimate:	3,979.7

**SOURCES OF NEW ORDERS & REVENUE  
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FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
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	FY 2022	FY 2023	FY 2024
	-----	-----	-----
1. New Orders	3,733.5	3,840.7	3,854.9
a. Orders from DoD Components:	3,725.0	3,840.7	3,854.9
Department of the Navy	3,514.4	3,736.1	3,715.2
O & M, Navy	3,399.2	3,708.0	3,689.0
O & M, Marine Corps	34.0	28.1	26.2
O & M, Navy Reserve	0.0	0.0	0.0
O & M, Marine Corp Reserve	0.0	0.0	0.0
Aircraft Procurement, Navy	0.0	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	22.9	0.0	0.0
National Sea Base Deterrence Fund	0.0	0.0	0.0
Other Procurement, Navy	0.0	0.0	0.0
Procurement, Marine Corps	22.7	0.0	0.0
Family Housing, Navy/MC	0.0	0.0	0.0
Research, Dev., Test, & Eval., Navy	20.2	0.0	0.0
Military Construction, Navy	0.0	0.0	0.0
National Defense Sealift Fund	0.4	0.0	0.0
Foreign Cooperative Projects, Navy	0.0	0.0	0.0
Other Navy Appropriations	0.0	0.0	0.0
Other Marine Corps Appropriations	15.9	0.0	0.0
Department of the Army	15.5	0.0	0.0
Army Operation & Maintenance	15.5	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	31.0	32.7	46.3
Air Force Operation & Maintenance	31.0	32.7	46.3
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	164.0	71.8	93.4
Base Closure & Realignment	0.0	0.0	0.0
Operation & Maintenance Accounts	81.8	32.6	29.5
Res, Dev, Test & Eval Accounts	79.2	39.2	63.8
Procurement Accounts	0.0	0.0	0.0
Defense Emergency Relief Fund	0.0	0.0	0.0
DOD Other	3.0	0.0	0.0
b. Orders from other Fund Activity Groups	8.3	0.0	0.0
c. Total DoD	3,733.2	3,840.7	3,854.9
d. Other Orders:	0.2	0.0	0.0
Other Federal Agencies	0.2	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	284.7	352.1	352.1
3. Total Gross Orders	4,018.1	4,192.8	4,207.0
a. Funded Carry-Over before Exclusions	352.1	352.1	352.1
4. Revenue(-)	3,666.0	3,840.7	3,854.9
5. End of Year Work-In-Process (-)	0.0	0.0	0.0
6. FMS, BRAC, Other Federal, Non-Federal orders, and Inst. MRTFB (-)	1.3	1.3	1.3
7. Funded Carryover	350.8	350.8	350.8

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

**REVENUE AND EXPENSES  
DEPARTMENT OF THE NAVY  
TRANSPORTATION - MILITARY SEALIFT COMMAND  
FISCAL YEAR (FY) 2024 BUDGET ESTIMATES  
MARCH 2023  
(DOLLARS IN MILLIONS)**

	FY 2022	FY 2023	FY 2024
	-----	-----	-----
Revenue:			
Gross Sales			
Operations	3,665.9	3,840.7	3,854.9
Capital Surcharges	0.0	0.0	0.0
Capital Investment Recovery	0.2	0.0	0.0
Other Income			
Total Income	3,666.0	3,840.7	3,854.9
Expenses			
Cost of Materiel Sold from Inventory			
Salaries and Wages:			
Military Personnel Compensation & Benefits	0.0	17.6	17.5
Civilian Personnel Compensation & Benefits	923.6	1,003.4	1,067.3
Travel and Transportation of Personnel	52.6	40.5	55.2
Material & Supplies (Internal Operations)	600.5	520.3	601.6
Equipment	215.3	292.9	200.7
Other Purchases from NWCF	3.0	0.0	0.0
Transportation of Things	12.1	10.5	10.3
Capital Investment Recovery	0.2	0.0	0.0
Printing and Reproduction	0.4	0.4	0.5
Advisory and Assistance Services	0.0	0.0	0.0
Rent, Communication, Utilities & Misc Charges	494.7	412.9	408.1
Other Purchased Services	1,367.0	1,611.8	1,618.5
Total Expenses	3,669.5	3,910.3	3,979.7
Work in Process Adjustment	0.0	0.0	0.0
Comp Work for Activity Retention Adjustment	0.0	0.0	0.0
Cost of Goods Sold	3,669.5	3,910.3	3,979.7
Operating Result	-3.5	-69.7	-124.9
Adjustments Affecting NOR	-606.3	0.0	97.9
Capital Surcharges	0.0	0.0	0.0
Extraordinary Expenses Unmatched	0.0	0.0	0.0
Other Changes Affecting NOR (All Others)	-606.3	0.0	97.9
Net Operating Result	-3.5	-69.7	-124.9
PY AOR	730.1	96.7	27.0
TOTAL AOR	120.4	27.0	0.0
Deferred Adjustments impacting AOR	-23.7	0.0	0.0
AOR for budget purposes	96.7	27.0	0.0

**FUEL DATA**  
**DEPARTMENT OF THE NAVY**  
**TRANSPORTATION - MILITARY SEALIFT COMMAND**  
**FISCAL YEAR (FY) 2024 BUDGET ESTIMATES**  
**MARCH 2023**  
**(DOLLARS IN MILLIONS)**

BUDGET FUEL DATA	PROCURED FROM DLA ENERGY								
	FY 2022			FY 2023			FY 2024		
	BARRELS	COST PER	EXTENDED	BARRELS	COST PER	EXTENDED	BARRELS	COST PER	EXTENDED
PRODUCT	BARREL	BARREL	PRICE	BARREL	BARREL	PRICE	BARREL	BARREL	PRICE
	(Millions)	(\$)	(\$ Millions)	(Millions)	(\$)	(\$ Millions)	(Millions)	(\$)	(\$ Millions)
BUNKER MARINE	.195	154.45	30.160	.197	168.00	33.115	.221	152.04	33.525
DISTILLATE (DIESEL F76)	2.567	171.09	439.129	3.298	164.64	542.934	3.168	148.68	471.015
RESIDUAL BURNER GRADE FS4	.023	96.00	2.162	.026	104.58	2.673	.000	94.50	.000
TOTAL	2.784		471.450	3.520		578.723	3.388		504.540

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