

ARMY WORKING CAPITAL FUND FISCAL YEAR 2024 BUDGET ESTIMATES



SUBMITTED TO CONGRESS MARCH 2023

Front Cover Photograph:

U.S. Soldiers aboard an M2A3 Bradley Fighting Vehicle

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An Army M1A2 Abrams tank fires during a gunnery exercise

The estimated cost of this report for the Department of Defense (DOD) is approximately \$69,214 for Fiscal Year 2023. This includes \$2,385 in expenses and \$66,829 in DOD labor.

All photographs in this document were obtained from official U.S. Department of Defense web sites.

Includes FY 2022 Consolidated Appropriations Act (P.L. 117-103) and any supplementals from Continuing Resolution Appropriations (P.L. 117-43, Divisions B III and C II, 117-70, Division B I, and P.L. 117-86, Division A).

Includes FY 2023 Consolidated Appropriations Act (P.L. 117-328), Continuing Resolution Appropriations (P.L. 117-180, 117-229, and P.L. 117-264), and supplementals.

Army Civilian Corps Creed

I am an Army civilian – a member of the Army team.

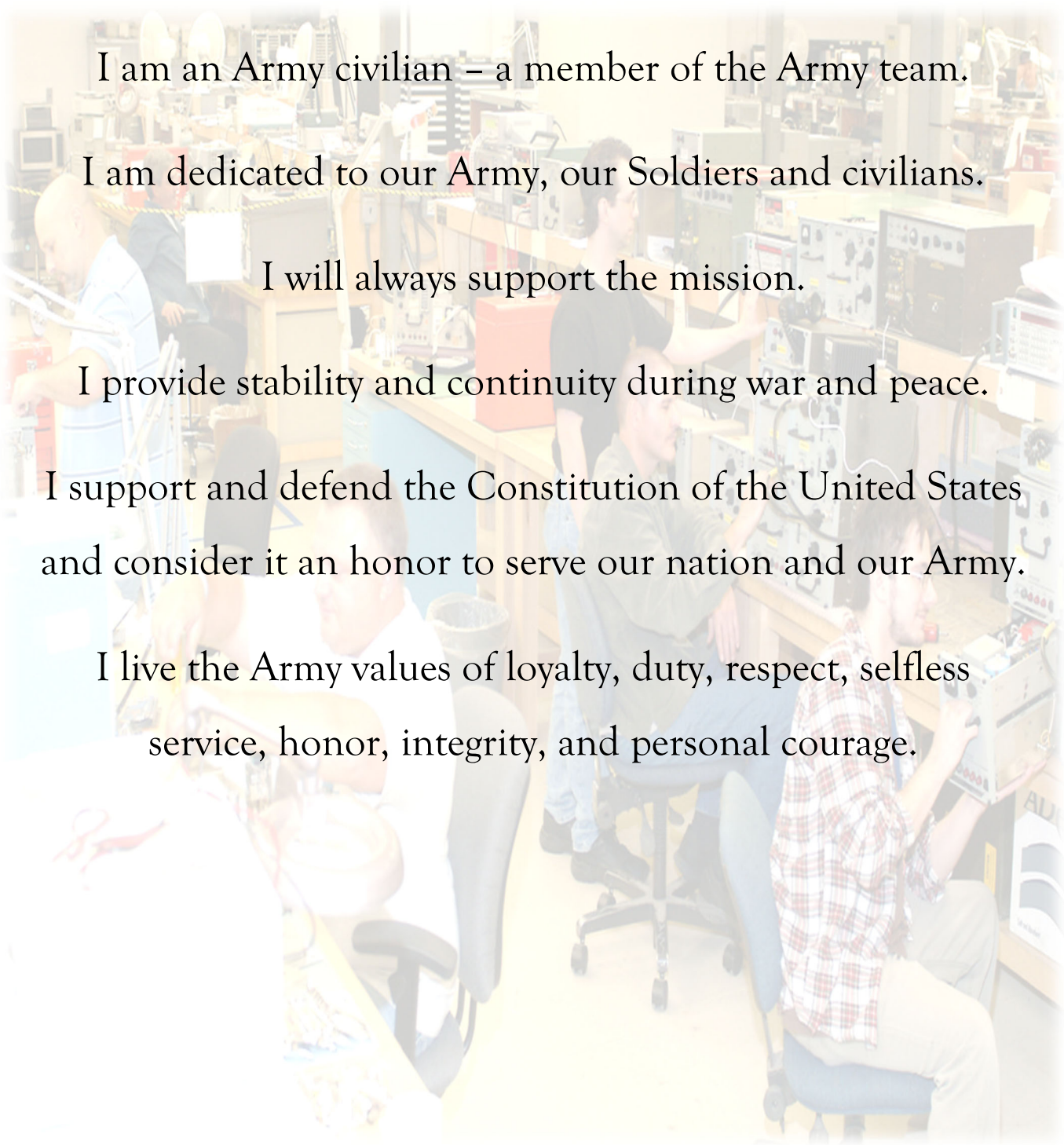
I am dedicated to our Army, our Soldiers and civilians.

I will always support the mission.

I provide stability and continuity during war and peace.

I support and defend the Constitution of the United States and consider it an honor to serve our nation and our Army.

I live the Army values of loyalty, duty, respect, selfless service, honor, integrity, and personal courage.



Army Overview

Background

Working capital funds were established by Congress to more effectively control and account for the cost of programs and work performed in the Department of Defense. Under the provisions of Title 10 United States Code, § 2208, the Secretary of Defense may establish working capital funds to finance inventories of supplies and industrial-type activities that provide common services such as repair, manufacturing, or remanufacturing. Unlike profit-oriented commercial businesses, the revolving fund's goal is to break even by returning any monetary gains to appropriated fund customers through lower rates or collecting any monetary losses from customers through higher rates. Revolving fund prices are generally stabilized or fixed during the year of execution to protect customers from unforeseen fluctuations that would impact their ability to execute the programs approved by Congress.

The basic tenet of the revolving fund structure is to create a customer-provider relationship between military operating units and support organizations. This relationship is designed to make managers of the Army Working Capital Fund (AWCF) and decision-makers at all levels more aware of costs for goods and services.



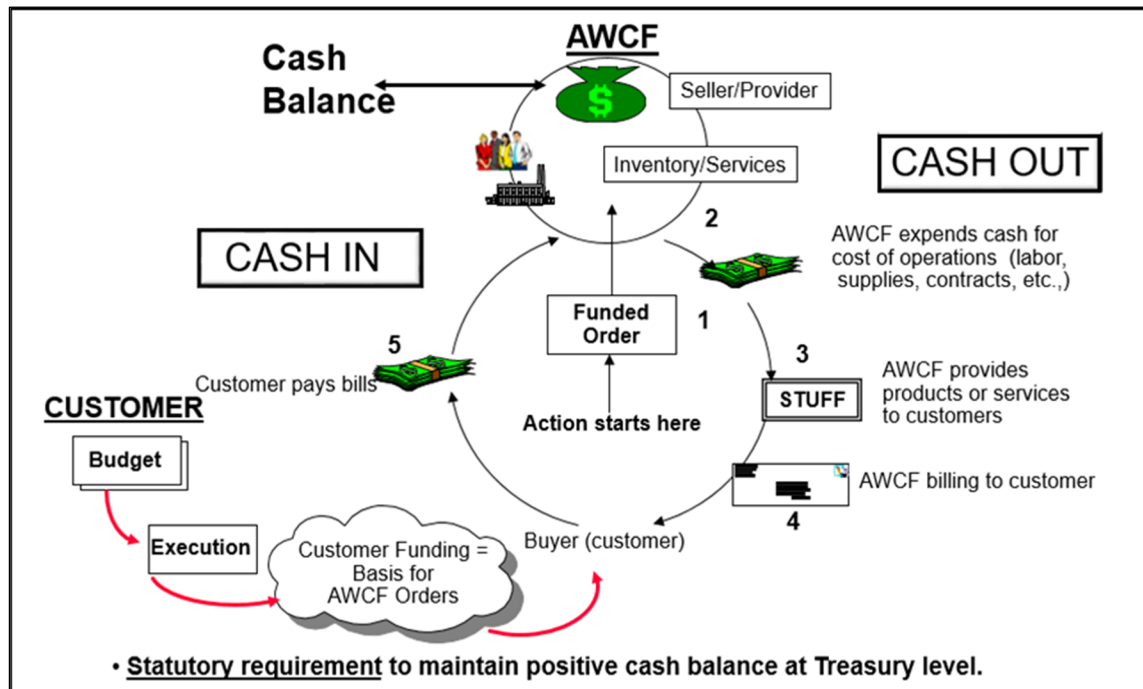
The first AH-64 Apache helicopter is discharged from a commercial cargo vessel

The Army's revolving fund activities evolved from two separate types of funds. The first type, known as the Stock Fund, procured spare parts in volume to either sell to customers or hold in inventory. The second type, known as the Industrial Fund, provided industrial services to customers, such as depot maintenance, munitions and weapon systems component manufacturing, and ammunition storage. Both types of revolving funds were financed primarily by reimbursements from customer appropriated accounts.

Figure 1, on the next page, shows the interaction between customers' appropriated funds, AWCF business operations, and cash. Customer appropriated funding is synchronized with AWCF workload forecasts during budget development. During the year of execution, appropriated fund customers submit funded orders (1) to AWCF providers requesting services (repair, overhaul, or manufacturing) or supplies (spare or repair parts). This obligates appropriated funds. In step 2, AWCF Supply Management purchases inventory

for resale to customers. Also in step 2, Industrial Operations orders materiel and hires labor, supporting the projected workload (CASH OUT). In step 3, the customer receives the completed product or service and a bill (4) for payment. The customer pays the AWCF (5) for the materiel or services (CASH IN). Proper pricing of inventory and services, and accurately forecasting workload allows a balance between CASH OUT and CASH IN. Variance between these actions results in either a gain or loss of AWCF cash. Gains are returned to customers through lower future prices while losses are recouped through higher future prices.

Figure 1 - AWCF Cash Process



Introduction

The FY 2024 budget supports the Army's vision to provide ready, combat-credible forces that support enduring campaigns and active response missions as part of the Joint Force. The Army provides critical capabilities that enable operational support to Joint Force campaigns around the world and at home. The AWCF directly supports the materiel readiness of operating units.

The revolving fund structure encourages cost-effectiveness, flexibility, and adaptability to meet changing workload requirements in the year of execution. It also supports full cost visibility and full cost recovery while protecting appropriated fund customer accounts from year of execution price changes. The AWCF consists of the Supply Management and Industrial Operations activity groups, with operations spanning across 17 cities and local areas within 14 states. The exact locations are shown in each business activity's portion of the budget. The AWCF activities disbursed approximately \$10.2 billion in FY 2022 to maintain the readiness and sustainability of military equipment.

Performance Measures

Key financial measures are net operating result, accumulated operating result, and unit cost.

The net operating result (NOR) represents the difference between revenue and expenses within a fiscal year. Accumulated operating result (AOR) represents the summation of all operating gains or losses since activity group inception along with any prior period adjustments. Prices and rates are set at a level that brings the accumulated gains and losses to zero over the budget cycle. The unit cost is a metric primarily used in the Supply Management activity group to relate operating costs to each dollar of sales. It is measured by dividing gross operating cost (the sum of total obligations, depreciation expense, and credit) by gross sales. Adjusting the unit cost determines how much obligation authority may be distributed based on gross sales.



An Army UH-60 Black Hawk helicopter taxis along the flight line after refueling during an exercise

In addition to financial measures (NOR, AOR, and unit cost), operational measures assess how well the financial inputs reflected in the AWCF budget support Army strategic goals and operational readiness. Operational measures

include productive yield (an indicator of whether direct labor employees can support projected workload) and stock availability (a measure of the ability of AWCF inventory to fill a customer's requisition). These are identified within each activity group's narrative.

Logistics Modernization Program

The Army's Logistics Modernization Program (LMP) provides a modernized logistics and finance solution that allows the U.S. Army Materiel Command (AMC) to provide world-class logistics readiness to Soldiers. LMP delivers a fully integrated suite of software and business processes, providing streamlined data on maintenance, repair and overhaul, finance, acquisition, spare parts, and materiel. It is the Army's core logistics information technology (IT) initiative, which meets the Army's IT logistics vision of transformation from legacy applications to a modernized logistics enterprise solution.

LMP manages approximately seven million transactions daily and is integrated with more than 56 DOD systems including interfaces with Army's other enterprise resource planning systems: Army Enterprise Systems Integration Program; Global Combat Support System-Army; and General Fund Enterprise Business Systems. LMP is currently used by more than 21,000 users at more than 50 Army and DOD locations worldwide. Enhancements and system changes continue to be applied to LMP to ensure compliance with statutory and regulatory requirements.



Soldiers conduct sling load operations with a CH-47 Chinook

Activity Groups

Supply Management

The Supply Management activity group buys and manages spare and repair parts for sale to its customers, primarily Army operating units. The activity group is committed to supporting and building readiness for present and future challenges. The Army's equipment and operational readiness, and the strength to win the Nation's wars, are directly linked to the availability of spare parts. Supply Management administers spare parts inventory for Army managed items, Non-Army managed items (NAMI) and war reserve secondary items (WRSI). It also maintains a protected inventory of spares in Army Prepositioned Stocks (APS), which is released to support deploying combat units. The Life Cycle Management Commands assigned to the Army Materiel Command manages the Supply Management activity, which consists of four major commodity groups: aviation and missile; communications-electronics; tank-automotive and armament; and NAMI. The war reserve stocks contain materiel from all commodity groups. As new equipment is added to the Army's operational and training forces, new spare parts are also scheduled for inclusion in the Supply Management inventory.

Industrial Operations

The Industrial Operations activity group provides the Army an organic industrial capability to: conduct depot level maintenance, repair and upgrade; produce munitions and large caliber weapons; and store, maintain, and demilitarize materiel for all branches of DOD. Industrial Operations is comprised of 13 government owned and operated installation activities, each with unique core competencies. These include five hard-iron maintenance



Soldiers conduct daily maintenance and pre-flight inspections on a CH-47F Chinook helicopter

depots, three arsenals, two munitions production facilities, and three storage sites. Although comprised of diverse organic industrial capabilities, the preponderance of workload and associated estimates in the Industrial Operations budget submission relate to depot level maintenance, repair, and upgrade. The complex operational environment continues to place tremendous demands on equipment, resulting in higher usage rates than in routine peacetime operations.

The Industrial Operations activities play an integral role in resetting equipment as it retrogrades from combat operations.

The Army's equipment Reset program is defined as a set of actions restoring equipment to a level of pre-deployment capability commensurate with a unit's future mission. Army equipment reset will replace¹, recapitalize², or repair³ equipment to meet 10/20 maintenance standards and operational requirements. The Industrial Operations activity group is involved with both the recapitalization and repair efforts. The budget incorporates depot workload assumptions associated with the Reset program and peacetime training operations.

Budget Highlights

Overview

The FY 2024 budget represents a business plan that supports Soldier and weapon systems readiness for both peacetime training and overseas operating requirements. The AWCF provides materiel readiness to operating units in support of the Army's training strategy to build and sustain core warfighting capabilities to meet the National Defense Strategy (NDS). The NDS prioritizes modernization and readiness requirements necessary to expand multi-domain operations amidst uncertainty.

The predictability of resources is critical for accurately forecasting and executing workload. OPTEMPO assumptions assist in the development of the budget request, but as changes to these assumptions materialize, the projections for the AWCF can change significantly. To offset this risk, both activity groups must adapt to changing workload forecasts, constraining or expanding costs as necessary.

In FY 2024, a unit cost goal equal to 1.0 will balance AWCF sales and inventory replenishment, allowing the cash balance to remain between the upper and lower operating limits. The Supply Management budget request includes variability target to support spares replacement in the event of a surge in customer

¹ The purchase of new equipment to replace battle losses, worn-out or obsolete equipment, and critical equipment deployed and left in theater, but needed for homeland defense, homeland security, and other critical missions.

² A rebuild effort that extends the equipment's useful life by returning it to a near zero-mile/zero-hour condition with either the original performance specifications or with upgraded performance specifications.

³ A repair or overhaul effort that returns the equipment's condition to the Army standard. It includes the Special Technical Inspection and Repair (STIR) program for aircraft.

demands above projected levels. The Industrial Operations activity group budget request includes a mix of permanent, temporary, and term-appointment employees, in addition to contract labor, to better respond to unanticipated increases or decreases in new orders.

Personnel

The Supply Management personnel posture reflects consistent civilian end strength and full time equivalents from FY 2023 to FY 2024. The Industrial Operations civilian end strength and full time equivalents decline from FY 2023 to FY 2024. Changes to personnel levels are discussed within the narrative of each activity group. Civilian and military end strength and civilian full-time equivalents are shown in the following table.

Table 1 - Personnel

	FY 2022	FY 2023	FY 2024
Supply Management			
<i>Civilian End Strength</i>	1,964	2,126	2,126
<i>Full Time Equivalents</i>	1,933	2,126	2,126
<i>Military End Strength</i>	2	2	2
Industrial Operations			
<i>Civilian End Strength</i>	17,203	17,178	16,729
<i>Full Time Equivalents</i>	17,798	17,457	16,747
<i>Military End Strength</i>	22	24	24
Total			
<i>Civilian End Strength</i>	19,167	19,304	18,855
<i>Full Time Equivalents</i>	19,731	19,583	18,873
<i>Military End Strength</i>	24	26	26

Revenue and Expenses

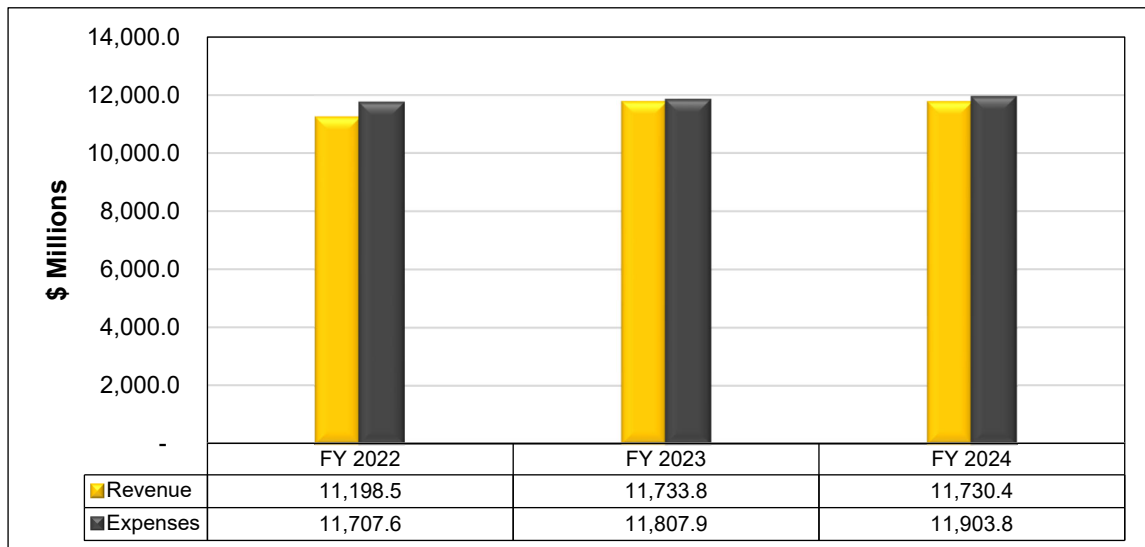
Revenue is an indicator of the combined volume of work completed by the AWCF activity groups. Expenses identify the cost of goods and services produced or sold. In aggregate, revenue is expected to remain relatively steady through the budget year, while expenses are expected to slightly increase. Major expense drivers include cost of goods sold for Supply Management and the cost of labor and materiel consumed in Industrial Operations. Table 2 and Chart 1 show revenue and expenses for Supply Management and Industrial Operations.

Table 2 - Revenue and Expenses

(\$ Millions)	FY 2022	FY 2023	FY 2024
Revenue			
<i>Supply Management</i>			
<i>Gross Sales</i>	8,462.4	9,109.3	9,284.4
<i>Less Credit</i>	1,437.1	1,743.3	1,768.0
<i>Net Supply Management</i>	7,025.4	7,366.1	7,516.4
<i>Industrial Operations</i>	4,173.2	4,367.7	4,214.0
Total Revenue	11,198.5	11,733.8	11,730.4
Expenses			
<i>Supply Management</i>	6,923.3	7,197.6	7,529.6
<i>Industrial Operations</i>	4,784.3	4,610.2	4,374.2
Total Expenses	11,707.6	11,807.9	11,903.8

Note: Total revenue above does not include Supply Management appropriated funds as shown on the Supply Management Exhibit Fund 14, *Revenue and Costs*. Numbers may not add due to rounding.

Chart 1 - Revenue and Expenses



Net and Accumulated Operating Results

Financial performance is measured by comparing actual results to goals. The goal of the AWCF is to break even over time. Army considers several factors when determining the amount of Accumulated Operating Result (AOR) to return in the rates. Returning a large positive AOR balance in one year may cause the rates to drop significantly in that year and increase significantly in the following year. In addition, the Army reviews the cash balance and the projected balance for the budget year to determine if sufficient cash exists to return the gain to the customers. The Supply Management and Industrial Operations activity groups'

rates will drive Accumulated Operating Results of zero in FY 2024. Table 3 shows the net and accumulated operating results for both Supply Management and Industrial Operations. Details can be found under the NOR and AOR section for each business area.

Table 3 - Operating Results

(\$ Millions)	FY 2022	FY 2023	FY 2024
Supply Management			
<i>Net Operating Result</i>	102.0	168.5	(13.2)
<i>Prior Year AOR</i>	(257.3)	(155.3)	13.2
<i>Accumulated Operating Result</i>	(155.3)	13.2	0.0
Industrial Operations			
<i>Recoverable Net Operating Result</i>	12.4	23.6	(73.4)
<i>Accumulated Operating Result</i>	49.9	73.4	0.0
<i>Note: Numbers may not add due to rounding.</i>			

Customer Rates

Each activity group has a unique rate structure. The Supply Management activity group adds a cost recovery rate (CRR) to the price of inventory items sold to recoup operating costs. Typical cost categories within the CRR include civilian pay, distribution depot costs, transportation costs, other Defense bills associated with supply operations, and costs of replacing inventory losses. The Industrial Operations activity group sets customer rates on a direct labor hour basis. The hourly composite rate recovers all costs, both direct and overhead. Activity group rates are stabilized so that the customer's buying power is protected from price swings during the year of execution. A higher sales volume in FY 2024 will drive a slight decrease to the Supply Management cost recovery rate. The Industrial Operations FY 2024 rate increase brings the rate closer to a self-sustaining level of operations as the business right sizes workforce to workload. Table 4 shows the Supply Management composite cost recovery rates and the Industrial Operations composite direct labor hour rates.

Table 4 - Customer Rates

	FY 2022	FY 2023	FY 2024
Supply Management	23.4%	22.9%	19.6%
Industrial Operations	\$169.89	\$204.73	\$233.58

Customer Rate Change

The Supply Management customer rate change is expressed as the change in overhead costs weighted by sales revenue. The Industrial Operations composite revenue rate is comprised of direct labor and material costs, overhead costs (mission indirect and non-mission indirect costs) and accumulated operating result adjustments that are designed to return gains or recover losses. Table 5 shows the customer rate change for both business areas.

Table 5 - Price Change to Customer

	FY 2022	FY 2023	FY 2024
Supply Management	8.1%	(0.3%)	(2.4%)
Industrial Operations	9.4%	20.5%	14.1%

Fund Balance with Treasury

The Defense Working Capital Fund (DWCF) Fund Balance with Treasury, account symbol 97X4930, is subdivided at the Treasury into five sub-numbered Treasury accounts. The Army's account is 97X4930.001. The current balance of funds with Treasury is equal to 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. The AWCF is required to maintain a positive cash balance to prevent an Anti-deficiency Act violation under Title 31, United States Code, § 1517(a), *Prohibited obligations and expenditures*. Unlike appropriated funds, the AWCF cash balance 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 plus six months of capital investment program disbursements.

The operational requirement may include any positive cumulative operating result returned to customers, cash equal to undisbursed direct appropriations, and a commodity/market adjustment. In preparation for daily cash visibility at the Department of Treasury, Army studied weekday cash transactions from the Logistics Modernization Program (LMP). This study identified a pattern of multiple disbursement cycles before a collection cycle. The operational cash requirement also includes risk mitigation factors to ensure sufficient cash is available for these cycles.

The cash balance is primarily affected by cash generated from operations, but the balance 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 losses, and accurately projecting workload.

Cash from Operations

The day-to-day operation of the fund consumes cash with disbursements and replenishes cash with collections. The FY 2024 cash plan includes all expected collections and disbursements from the operation of both the Supply Management and Industrial Operation activity groups, including appropriations and transfers.

Chart 2 displays collections and disbursements from operations; however, it does not include receipt of appropriations or transfers. Army forecasts an increase to collections as net sales are projected to increase. Disbursements are also projected to grow as Army is increasing its FY 2023 contract authority obligations by approximately \$1.9 billion to replenish FY 2023's projected sales as well as inventory sold above plan in FY 2022.

Chart 2 - Cash from Operations

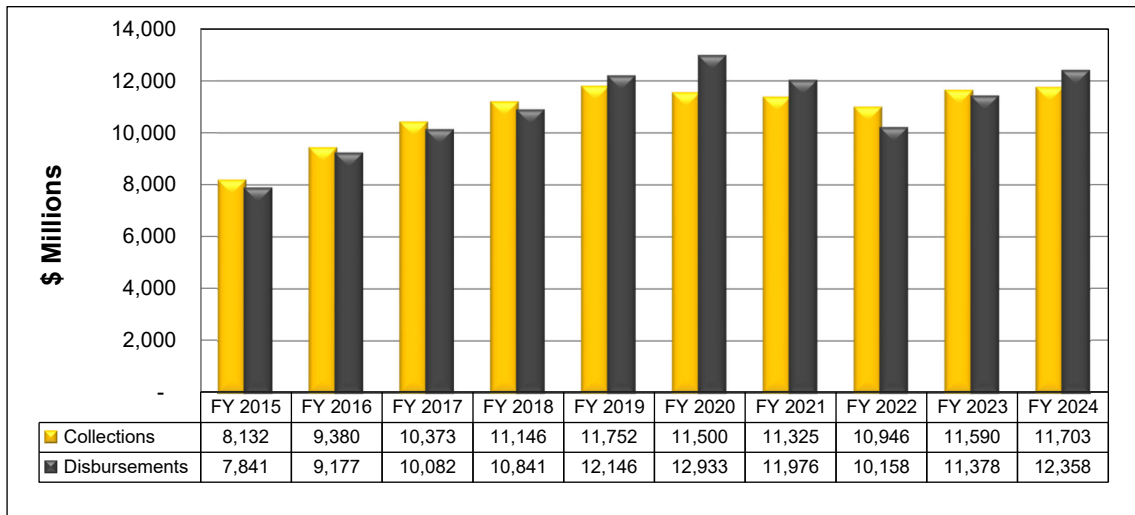
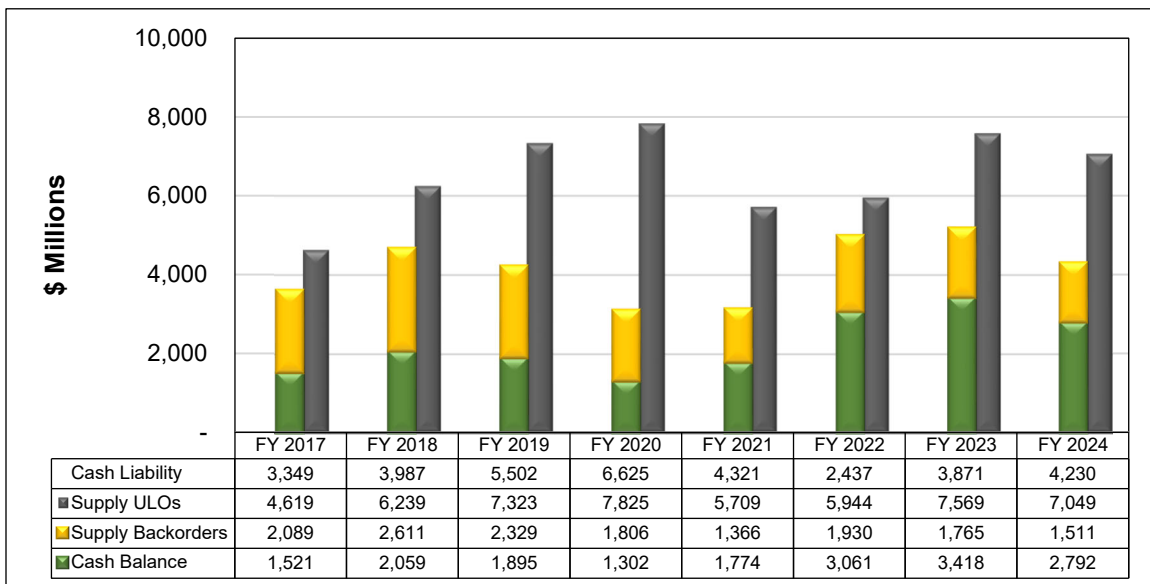


Chart 3 displays the potential risk to the AWCF cash balance through FY 2024 due to unliquidated obligations (ULOs). ULOs represent the dollar value of material and services ordered but not yet received by the AWCF. ULOs will result in future disbursements, reducing cash. There is increased risk to cash when ULOs are high even though collections from backorders mitigate a portion of this risk. Fund managers must maintain a sufficient cash balance to cover future disbursements as the material and services are delivered. The AWCF experienced a large increase to ULOs from FY 2017 through FY 2020 due to significant increases in material obligations supporting the Army's readiness objectives. Supply Management's FY 2023 and FY 2024 ULOs are projected to be significantly higher than FY 2022 due to an increase in Supply Management hardware obligations.

Chart 3 – Cash Liability



Appropriations

Army requests \$1.7 million in FY 2024 for secondary items to support War Reserve equipment. War reserve equipment positioned without secondary items would significantly jeopardize Army's ability to complete its combat missions successfully. The secondary items purchased for war reserves support important combat weapon systems such as M2 Bradley Fighting Vehicle, artillery howitzers, rocket launchers, High Mobility Multipurpose Wheeled Vehicles (HMMWV), and Mine Resistant Ambush Protected (MRAP) Vehicles. The FY 2024 War Reserve request will fund secondary items for Operational Project stocks. Secondary items for sustainment stocks are no longer supported by war reserve funding.

The Army requests \$27.6 million for Industrial Mobilization Capacity (IMC) in FY 2024. IMC funding sustains industrial base equipment required for mobilization that is idle for more than 80 percent in any one month but used at least once during the year. Army Organic Industrial base (OIB) workload has steadily declined over the past ten years resulting in some equipment being utilized at these lower rates. The Army requires IMC funding to sustain this equipment, enabling the OIB to rapidly surge in support of a future mobilization.

Table 6 – Appropriations

(\$ Millions)	FY 2022	FY 2023	FY 2024
War Reserve Secondary Items	30.1	1.5	1.7
Industrial Mobilization Capacity	26.9	28.4	27.6
Arsenal Sustainment Initiative	115.0	115.0	-
Total Appropriated Funds	172.0	144.9	29.2

Cash Management Plan

The FY 2023 President's Budget was the first budget in which the Army developed an upper and lower operational cash requirement for both the Supply Management and Industrial Operations business activities. The AWCF cash requirement is established using a process based on four primary elements: 1) *rate* of disbursements; 2) *range* of operations; 3) *risk* mitigation; and 4) cash *reserves*. This method is known as the "Four Rs", and the elements are explained below:

- 1) **Rate of Disbursements** – This element is intended to measure the average amount of cash needed between collection cycles. It is calculated by dividing total projected disbursements by the total projected number of collection cycles in each fiscal year. For Supply Management, the assumption is 48 collection cycles per year, or approximately four per month. For Industrial Operations, the assumption is 24 collection cycles per year, or approximately two per month. The projected rate of disbursements for Supply Management trends upward from FY 2022 to

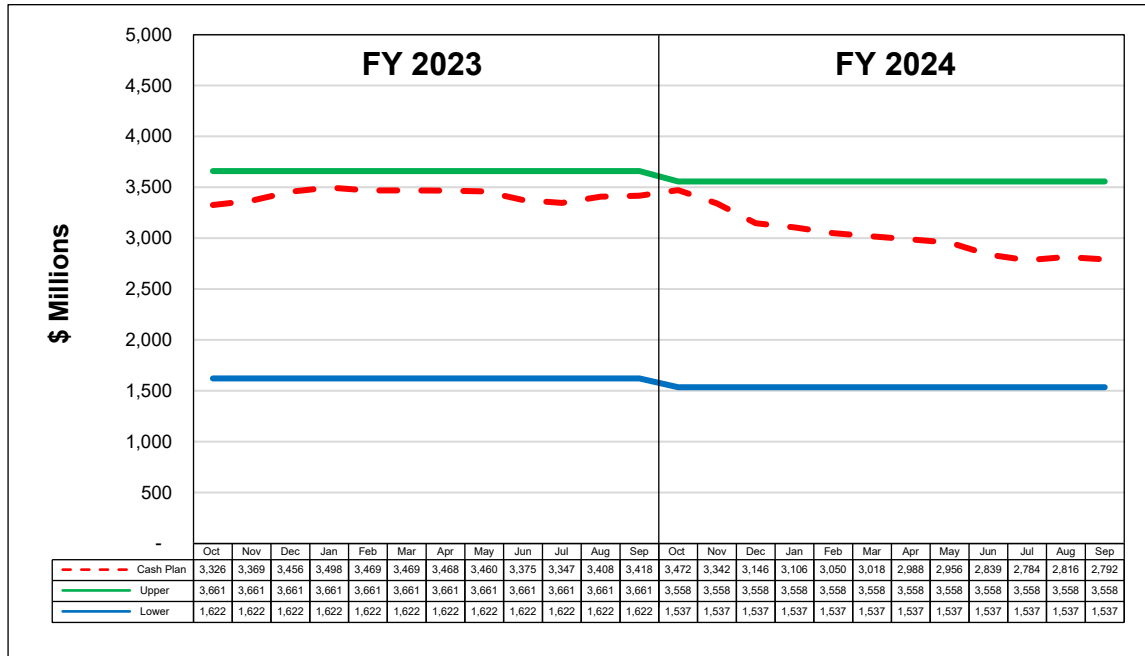
FY 2024. This is primarily due to an increase in contract authority obligations in FY 2023. The projected rate of disbursements for Industrial Operations trends downward between FY 2023 and FY 2024 due to an anticipated reduction in expenses.

- 2) **Range of Operations** – The range of operations is derived using the difference between the highest and lowest observed monthly cash level over a 12-month period in the preceding fiscal years. In general, the range of operations will increase in years following increased cash volatility, which the Army experienced in FY 2020 through FY 2022. The Army factors in the rate of disbursements into the projected range of operations. The range of operation increases significantly from FY 2022 to FY 2023, primarily attributed to the considerable cash volatility experienced within the Supply Management business activity over the last few years.
- 3) **Risk Mitigation** – The risk mitigation calculation accounts for near-term operational risk derived from historical operational volatility due to events such as having multiple disbursement cycles before a collection cycle. The Army takes into account historical intra-month cash volatility when calculating the risk number for each activity group. Army performs a statistical analysis to calculate the historical intra-month operational cash volatility to three standard deviations. This amount is held in cash reserves to reduce risk of insolvency for any given month. The risk mitigation element has remained relatively consistent from FY 2022 to FY 2024. Risk mitigation is calculated separately for Supply Management and Industrial Operations based on each business activity's historical net outlays, and then added together for a total AWCF risk mitigation number. In previous fiscal years, the risk mitigation element was calculated after combining total AWCF net outlays together.
- 4) **Cash Reserves** – The cash reserve element allows fund managers to hold cash in reserve to mitigate strategic risk. It acts as a strategic buffer to mitigate unexpected reductions in Supply Management demand or Industrial Operations orders. It also reduces the risk of solvency in the event of high levels of future disbursements tied to past due deliveries and unliquidated obligations. Additionally, cash reserves hold cash to account for future rate reductions required to return Accumulated Operating Results. AWCF cash reserves are relatively consistent from FY 2023 to FY 2024. Army's current assessment is that the reserves projected in this budget, combined with reduced contract authority expenditures, will be adequate to sustain AWCF operations with low risk of future insolvency.

Chart 4 shows the projected monthly cash balances for FY 2023 and FY 2024. This chart displays how the aforementioned cash from operations and appropriations affect the cash balance and where the projected ending balance

falls within the upper and lower operating range. The lower operational cash requirement is calculated by adding risk mitigation and reserves for the given fiscal year. The upper operating requirement is calculated by totaling the range of operation and the lower operating requirement.

Chart 4 – AWCF Cash Management Plan

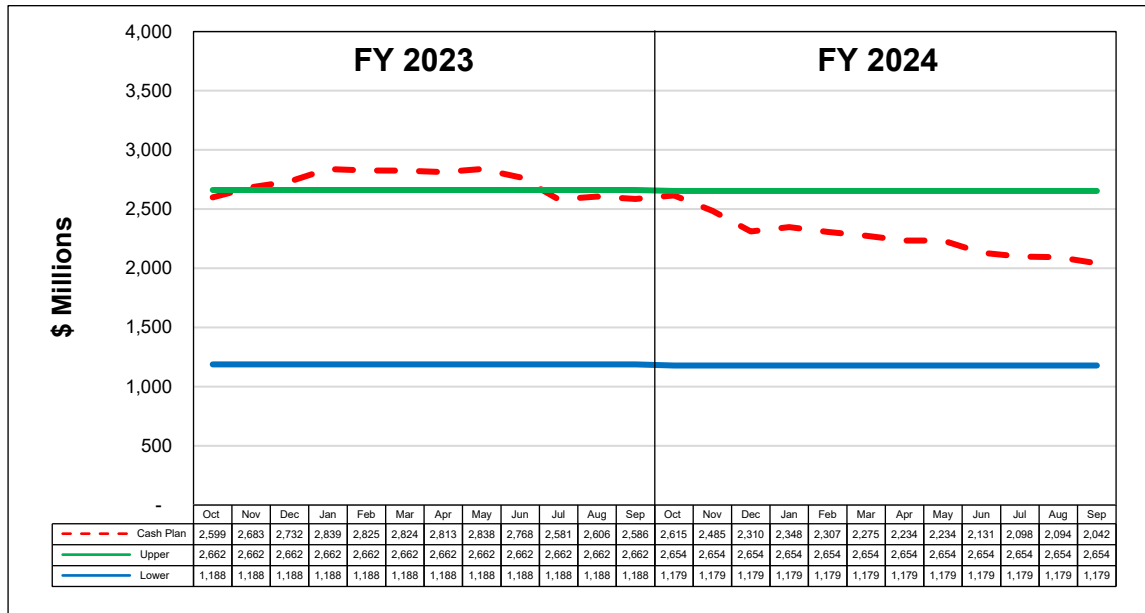


In FY 2023, a unit cost goal (UCG) equal to 1.13 will allow the Army to fully replenish its FY 2023 projected sales, as well as sales above plan in FY 2022. This increase in spending will result in higher disbursements beginning in FY 2024. In FY 2024, a unit cost goal equal to 1.0 will balance AWCF sales and inventory replenishment, allowing the cash balance to remain between the upper and lower operating limits. The Army will continue to set its UCG to balance future readiness with forecasted cash affordability. Additional details can be found within the Unit Cost section of the Supply Management narrative.

Supply Management Cash Plan

Chart 5 displays the Supply Management cash plan for FY 2023 and FY 2024. Separate upper and lower operational limits continue to be calculated for the Supply Management business area. The FY 2023 Supply Management cash plan includes receipt of a \$1.5 million appropriation in December 2023, and a \$181.1 million internal cash transfer to the Industrial Operations business area in July 2023. The FY 2024 Supply Management cash plan assumes receipt of a \$1.7 million appropriation in January 2024. The Supply Management cash balance is expected to end FY 2023 and FY 2024 between the upper and lower operational limits.

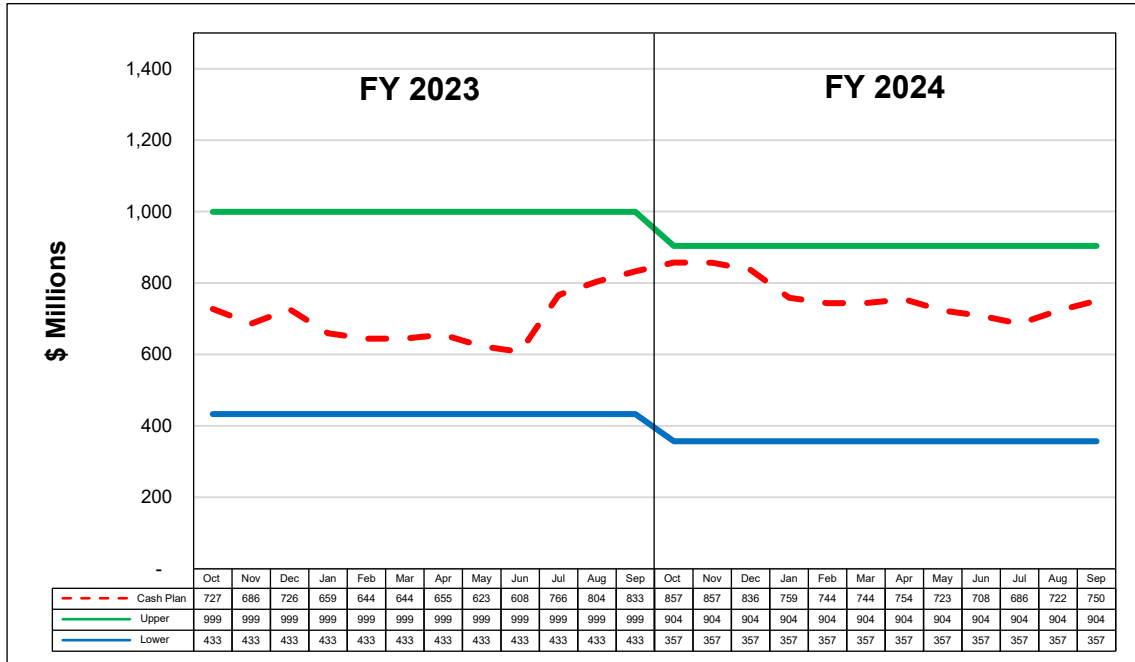
Chart 5 – Supply Management Cash Plan



Industrial Operations Cash Plan

Chart 6 displays the Industrial Operations cash plan for FY 2023 and FY 2024. The upper and lower operational limits are depicted in the chart. The FY 2023 cash plan includes receipt of a \$143.4 million appropriation in December 2022. In addition, the FY 2023 Industrial Operations cash plan includes a \$181.1 million internal cash transfer from Supply Management to prevent a large rate swing and keep Industrial Operations between the upper and lower operational limits. The FY 2024 cash plan assumes receipt of a \$27.6 million appropriation in January 2024. The Industrial Operations cash balance is expected to remain within the upper and lower operational limits in FY 2023 and FY 2024.

Chart 6 – Industrial Operations Cash Plan



End of Year Cash Balance

Table 7 shows total collections, disbursements, appropriations, transfers, and ending cash balances. The FY 2024 budget includes a cash plan based on projected operational and capital disbursements, collections, and direct appropriations. Upper and lower operational range cash requirements have been identified to measure the sufficiency of cash. AWCF remains sensitive to large swings in demand activity. The FY 2024 cash balance is projected to be within the upper and lower operational requirements.

Table 7 – Cash Balance

(\$ Millions)	FY 2022	FY 2023	FY 2024
<i>Disbursements</i>	10,157.9	11,378.4	12,357.9
<i>Collections</i>	10,945.7	11,590.4	11,702.8
<i>Net Outlays from Operations</i>	(787.8)	(211.9)	655.1
<i>Direct Appropriations</i>	499.7	144.9	29.2
<i>Transfers In</i>	0.0	0.0	0.0
<i>Transfers Out</i>	0.0	0.0	0.0
<i>Total Net Outlays</i>	(1,287.5)	(356.9)	625.9
<i>Ending Cash Balance</i>	3,061.1	3,418.0	2,792.1
<i>Upper Operating Range</i>	2,825.4	3,660.9	3,558.0
<i>Lower Operating Range</i>	1,532.0	1,621.7	1,536.5

Note: Numbers may not add due to rounding.

Capital Budget

The AWCF activities develop and maintain operational capabilities by acquiring or replacing production equipment, executing minor construction projects, and developing software. New equipment is acquired to replace obsolete and unserviceable equipment, modernize production and maintenance processes, and eliminate environmental hazards. The cost of capital projects is recouped through capital investment recovery included in customer rates. Unlike the operating budget which contains the annual operating costs of each activity, the capital budget justifies the purchase of assets that equal or exceed a unit cost of \$250,000 and have a useful life of two or more years.

A more in-depth discussion and detailed exhibits are provided in the Capital Budget section. Table 8 summarizes the AWCF capital investment program request.

Table 8 - Capital Budget

(\$ Millions)	FY 2022	FY 2023	FY 2024
Supply Management	12.6	25.1	22.3
Industrial Operations	51.1	140.6	94.2
<i>Total Capital Budget</i>	63.6	165.7	116.6
<i>Total Capital Cash Outlays</i>	62.0	86.0	121.3
<i>Note: Numbers may not add due to rounding.</i>			

Supply Management

Introduction

The Supply Management activity group operates in a business-like environment by relying on sales revenue rather than appropriations to finance continuing operations. This enterprise uses contract authority to procure and repair spare parts. As suppliers deliver equipment components, the Army Working Capital Fund (AWCF) expends cash and places spare parts in inventory to await customer demands. Filled customer demands result in the collection of sales revenue, which replenishes cash. The Supply Management enterprise synchronizes rates and budget assumptions with Army appropriated funding requests in support of Soldier and weapon systems readiness. The bulk of demands originate from Operation and Maintenance, Army customers, who primarily request spare parts to maintain combat equipment readiness for the Army operating forces.

Mission:

Provide the Army with inventory management of spare and repair parts supporting equipment sustainment, operational readiness, and combat capability.

The Army prices spare parts based on the most recent acquisition cost from a commercial vendor, or the most recent repair cost from a contract or organic source of repair. The price of each item includes a surcharge known as the cost recovery rate (CRR), to recover the cost of AWCF operations. The intent of the CRR is to:

- Recover the activity's overhead costs such as payroll, supplies, contracts, storage, transportation, and depreciation
- Maintain a sufficient cash corpus to cover disbursements
- Break even over time

The core financial measures for Supply Management are the net operating result (NOR) and accumulated operating result (AOR). The NOR measures the activity's gain or loss within a single fiscal year, and is used to monitor how closely the activity performs compared to its budget. The AOR measures the activity's accumulated gains and losses since the fund's inception. Rates are set during budget development to break even by bringing the AOR to zero over a budget cycle. This method returns accumulated gains through reduced rates and recovers accumulated losses through increased rates. The cash management section describes the impact of cash balance analysis on rate setting. The unit cost is another core financial measure, and relates operating costs to each dollar

of sales. The unit cost can be set at, above, or below 1.0 depending on projected sales volume; the unit cost section discusses this metric.

Efficiencies and Business Process Improvements

Cost efficiency is an inherent attribute of the AWCF. The revolving fund construct promotes total cost visibility, full cost recovery, and fosters a business-like, competitive atmosphere. Although commercial businesses focus on their bottom line profit, the Supply Management activity focuses on the unit cost and other indicators to gauge the efficiency of the operation. Supply Management activities continue to emphasize the control of overhead costs also known as logistics operations (LOGOPS).

Army Materiel Command (AMC) continues proactive measures of reducing inventory and optimizing supply chain management through the Sales and Operations Planning (S&OP) process. The S&OP process allows management better oversight and improves the supply chain review process and financial planning. The supply chain review process has shifted from the legacy review of inventory by segmentations to total inventory holdings. The S&OP decisions and action plans align to established strategic goals and are executed through the Army's supply action module, Material Requirements Planning (MRP), in the Logistics Modernization Program (LMP). Army's current focus is on improving inventory turns, establishing new inventory reduction goals, and reducing forecast errors. AMC also facilitates quarterly reviews of unserviceable assets to better assess the need to repair rather than initiating new procurement.

Inventory Management

In FY 2016, the Army changed the methodology used to calculate inventory requirements from a quarterly stratification of inventory report known as STRAT to a monthly Supply Chain Planning and Reporting Tool (SCPRT). The movement to SCPRT aligns reporting requirements with the Army's Enterprise Resource Planning (ERP) system, LMP. This change leverages LMP's MRP module using backwards planning of requirements, improves accuracy of forecasting, and better supports Warfighter requirements.

Army continuously takes proactive measures ensuring forecasted inventory meets future demands. Army reviews and validates requirement levels versus inventory levels, maintaining focus on buying and repairing items needed by customers, and not retaining excess inventory.

Functional Description

The Supply Management activity group buys and manages an operating inventory of Army-managed and non-Army managed spare and repair parts for sale to its customers, primarily Army operating units. The activity group also maintains a protected inventory of spares in Army Prepositioned Stocks (APS) released in support of deploying combat units. The AWCF operating inventory is stored and maintained primarily at more than 200 supply support activities (SSA). SSA management includes, but is not limited to, stocking the items needed for customer readiness, monitoring performance metrics, and conducting inventories. Inventory is managed at national and below national levels as described below:

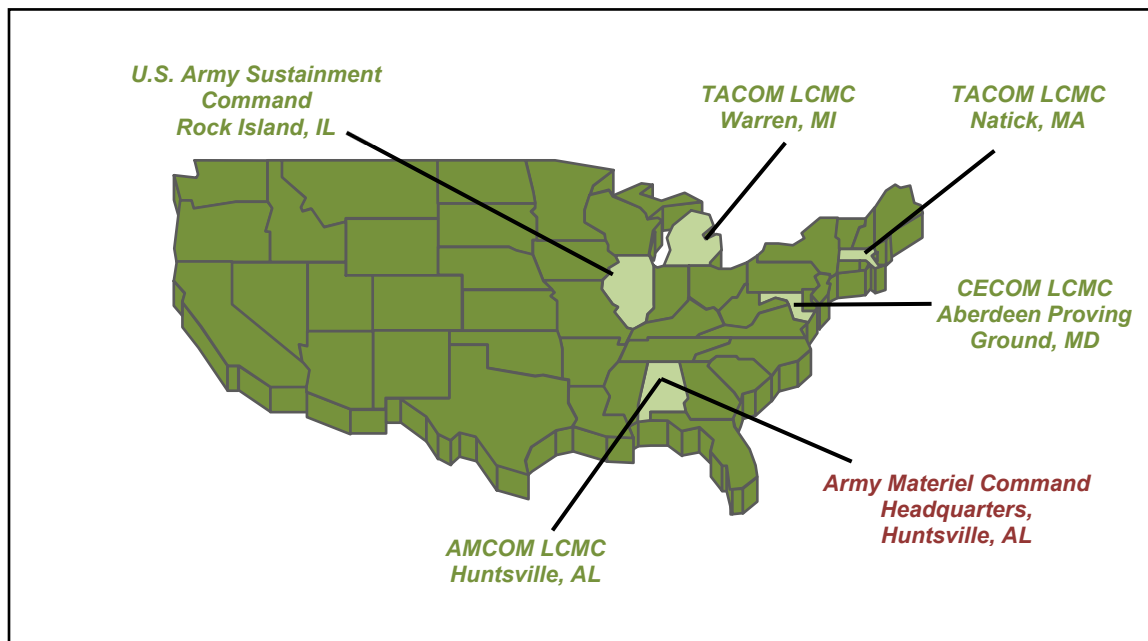
- National Level - consists of life cycle management commands, depots, and arsenals. Materiel may be Army managed or non-Army managed meaning the source of supply may be Department of the Army, another Service, or another Department of Defense activity. Typically, SSAs request and receive materiel from the national level.
- Below National Level:
 - Tactical – under the control of Sustainment Brigade Commanders. These SSAs provide spares supporting the immediate needs of combat support battalions and companies. The quantity of inventory items is limited to an amount capable of transport by unit organic vehicles or aircraft.
 - Installation - under the control of the Logistics Readiness Centers (LRC). These activities provide a means to retrograde unneeded materiel from tactical SSA to meet other Army requirements. They also stock back-up inventory to meet tactical units' requirements that exceed storage capacity. When deployed to a theater of operations, tactical activities receive back-up support from a theater distribution center established by the deployed force command to centrally receive, redistribute, and retrograde spares as required.

AWCF APS is protected inventory located in the United States, Europe, South Korea, Kuwait, and aboard ships afloat off Guam and Diego Garcia. This prepositioned war reserve materiel is protected inventory and released to units performing combat, peacekeeping, or other deployment operations.

Activity Group Composition

Figure SM 1 below displays the locations of Headquarters, Army Materiel Command (AMC), each Life Cycle Management Command (LCMC), and the Army Sustainment Command. The AMC mission is complex and ranges from developing sophisticated weapon systems, to advancing research, to maintaining, and distributing spare parts. Three core competencies encompass AMC's mission: acquisition excellence, logistics power projection, and technology generation and application. AMC works closely with industry, colleges and universities, the other Services, and other government agencies developing, buying, and maintaining state-of-the-art materiel for Army.

Figure SM 1 - Supply Management locations



The LCMCs, assigned to AMC, manage the activity group. Each LCMC acquires and manages consumable supplies and spare parts for distinct categories of weapon systems. The Army Sustainment Command acquires and maintains the Army Prepositioned Stocks, which contain materiel from each LCMC.

The mission of the Tank-automotive and Armaments Command (TACOM) LCMC includes developing, acquiring, equipping, and sustaining ground and support systems for Soldiers and other joint operations through the integration of effective and timely acquisition, logistics, and technology. The TACOM LCMC item managers support a diverse set of product lines through their life cycles, ranging from tracked combat and wheeled tactical vehicles, armaments, and watercraft, to Soldier-specific gear and biological/chemical equipment. Major weapon systems supported include the M1 Abrams Tank, M2 Bradley Fighting Vehicle, Mine Resistant Ambush Protected (MRAP) vehicle, High Mobility Multipurpose Wheeled Vehicle (HMMWV), and Stryker family of vehicles. TACOM LCMC is also responsible for providing clothing and heraldry products to Soldiers, units, and veterans. Included in TACOM LCMC is a small retail business of high demand non-Army managed items (NAMI). TACOM LCMC Headquarters activities are located at Detroit Arsenal in Warren, Michigan and U.S. Army Soldier Systems Center in Natick, Massachusetts. In FY 2024, TACOM LCMC has an authorized level of 714 civilian personnel.



Soldiers guide a Stryker Infantry Carrier Vehicle before a training exercise

The Communications-Electronics Command (CECOM) LCMC mission is to develop, provide, integrate, and sustain command, control, communications, computers, intelligence, surveillance, and reconnaissance capabilities for the Army. CECOM LCMC Headquarters activity is located at Aberdeen Proving Ground, Maryland. In FY 2024, CECOM has an authorized level of 796 civilian personnel.



U.S. Army paratroopers jump out of a CH-47 Chinook



U.S. Army Paratroopers pull in the static lines in a UH-60 Black Hawk Helicopter

The mission of the Aviation and Missile Command (AMCOM) LCMC includes developing, acquiring, fielding, and sustaining aviation, missile, and unmanned vehicle systems, ensuring readiness with seamless transition to combat operations. Major weapon systems supported include the AH-64 Apache, UH-60 Black Hawk, CH-47 Chinook, Multiple Launch Rocket System, and Patriot missile. AMCOM LCMC Headquarters activity is located at Redstone Arsenal in Huntsville, Alabama

and has operational control of all aviation logistics management functions at Fort Rucker, Alabama, home of the Army Aviation Center. In FY 2024, AMCOM has an authorized level of 520 civilian personnel.

The mission of the Army Sustainment Command (ASC) mission includes synchronizing distribution and sustainment of materiel to and from the field. Army Prepositioned Stocks are acquired and maintained as a part of this mission. These stocks include combat equipment, supplies, and humanitarian mission stocks at worldwide land and sea-based positions. ASC is located at Rock Island Arsenal, Illinois.

Budget Highlights

Assumptions

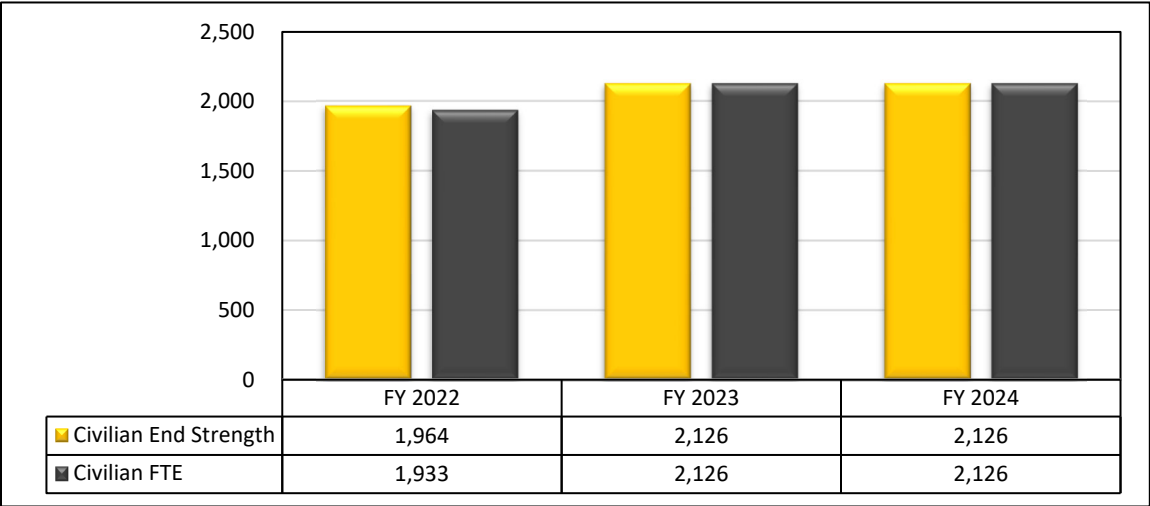
The FY 2024 budget represents a business plan that supports Soldier and weapon systems readiness for both peacetime training and overseas operating requirements. The AWCF provides materiel readiness to operating units in support of the Army’s training strategy to build and sustain core warfighting capabilities to meet the National Defense Strategy (NDS). The NDS prioritizes modernization and readiness requirements necessary to expand multi-domain operations amidst uncertainty.

If customer demand levels exceed budget estimates during the year of execution, variability target is included in the budget to ensure supply contract authority is available to remain ready and responsive to changing operational requirements. Variability target is further discussed in the Operating Contract Authority section.

Personnel

The personnel end strength reflects actual execution in FY 2022 and authorized levels in FY 2023 and FY 2024. Personnel levels include secondary item managers, logistics management specialists, and general and administrative support positions. Military end strength in FY 2024 is two.

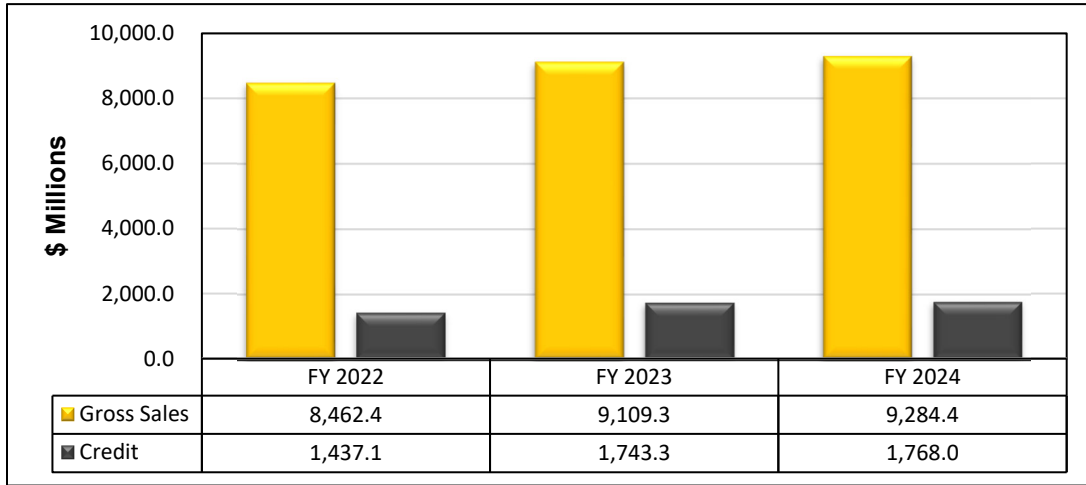
Chart SM 1 – Civilian Personnel



Sales

Sales reflect income from operations and do not include direct appropriations for war reserve materiel. Chart SM 2 reflects actual execution in FY 2022 and projected levels in FY 2023 and FY 2024. FY 2024 sales volume increases slightly from the FY 2023 level. Several exhibits display Sales: Fund 14, *Revenue and Costs*; Fund 11, *Source of New Orders and Revenue*; and SM 1, *Supply Management Summary* (sales net of credit).

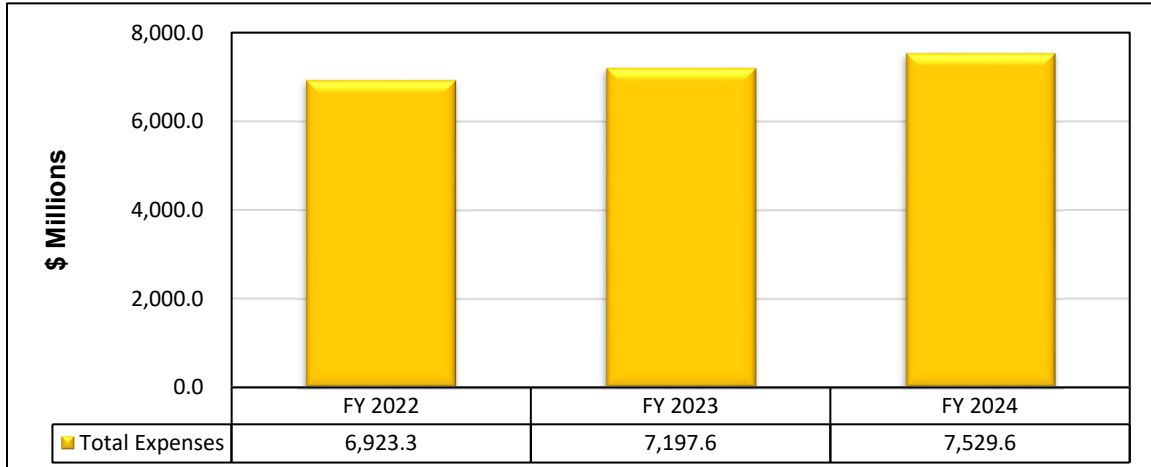
Chart SM 2 – Gross Sales



Expenses

Expenses consist of materiel and operational costs. The increase in projected FY 2024 expenses is attributed to higher cost of goods sold. Operational costs for salary, contracts, and materiel and supplies remain steady. Expenses are displayed on exhibit Fund 14, *Revenue and Costs*.

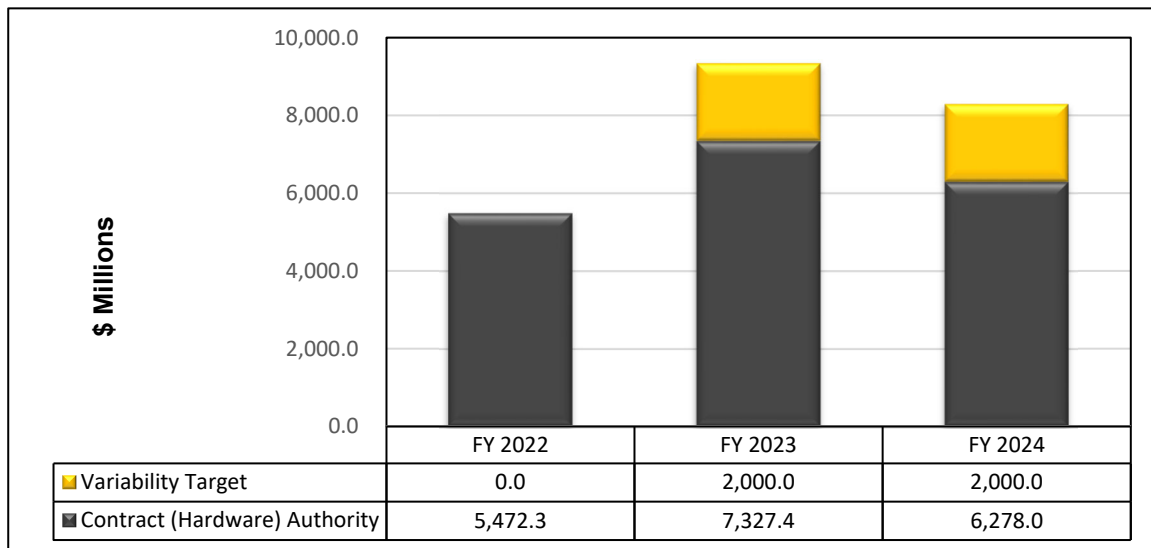
Chart SM 3 – Expenses



Operating Contract Authority (Hardware)

The budget requests operating contract authority for the acquisition, repair, and replenishment of spare parts. Army's FY 2023 hardware contract authority request is increasing by \$1.9 billion to replenish FY 2023's projected sales as well as inventory sold above plan in FY 2022. The FY 2024 contract authority request will replenish inventory sold in FY 2024 and is in line with projected sales to balance future readiness with cash affordability. Variability target is included in the budget to ensure contract authority is available to respond rapidly to unexpected surges in customer demands during the year of execution. Operating contract authority is displayed on exhibit SM 1, *Supply Management Summary* and SM 3b, *Operating Requirements by Weapon System*.

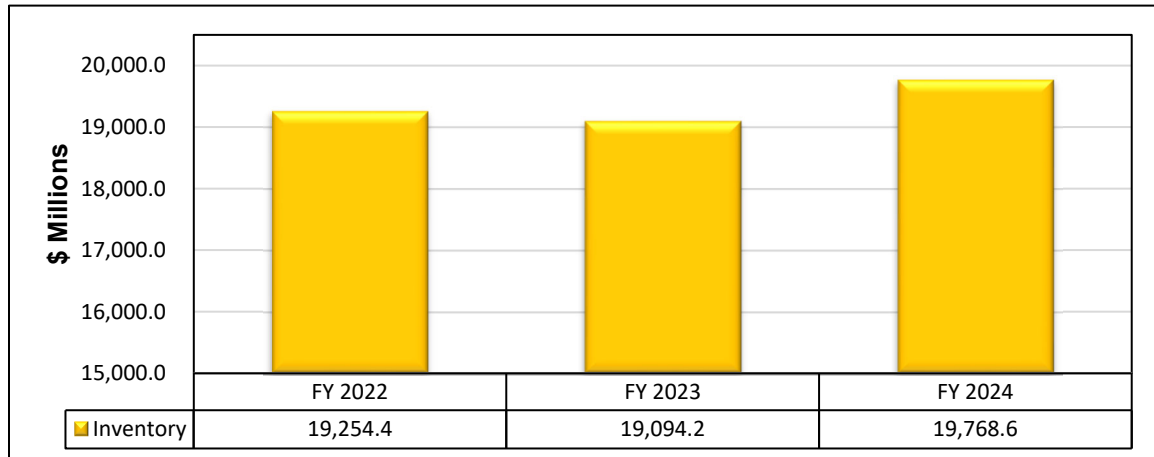
Chart SM 4 –Contract Authority (Hardware)



Inventory

Inventory values shown in chart SM 5, include operational inventory, carcasses awaiting repair, inventory required beyond the budget year, economic and contingency retention stock, and secondary items included in war reserve. Spares inventory levels are sufficient to ensure high stock availability for war efforts. Supply Management will increase inventory levels due to receipts of prior years' undelivered orders. Inventory is displayed on exhibit SM 4, *Inventory Status*.

Chart SM 5 – Inventory



Operating Results

The net operating result (NOR) represents the difference between revenue and expenses within a fiscal year. The Supply Management activity cost recovery rate will drive a negative Net Operating Result in FY 2024. The accumulated operating result (AOR) represents the summation of all operating gains and losses since activity group inception along with any prior period adjustments. AWCF operates on a break-even basis during the budget cycle. In the next budget cycle, Supply Management will evaluate its AOR projections, cash position, and impact on future rates to determine the amount of AOR to recover or return. NOR and AOR are displayed on exhibit Fund 14, *Revenue and Costs*.

Table SM 1 - Operating Results

(\$ Millions)	FY 2022	FY 2023	FY 2024
Net Operating Result	102.0	168.5	(13.2)
Prior Year AOR	(257.3)	(155.3)	13.2
Accumulated Operating Result	(155.3)	13.2	0.0

Cost Recovery Rate

The Supply Management cost recovery rate (CRR) is set to recover full costs and adjust for gains and losses. Typical costs recovered include civilian pay, distribution depot costs, transportation costs, other Defense bills associated with supply operations, and costs of replacing inventory washouts. Higher sales volume is driving a decrease in the FY 2024 cost recovery rate (CRR). The price change to customer is the change in overhead costs weighted by the change in sales volume.

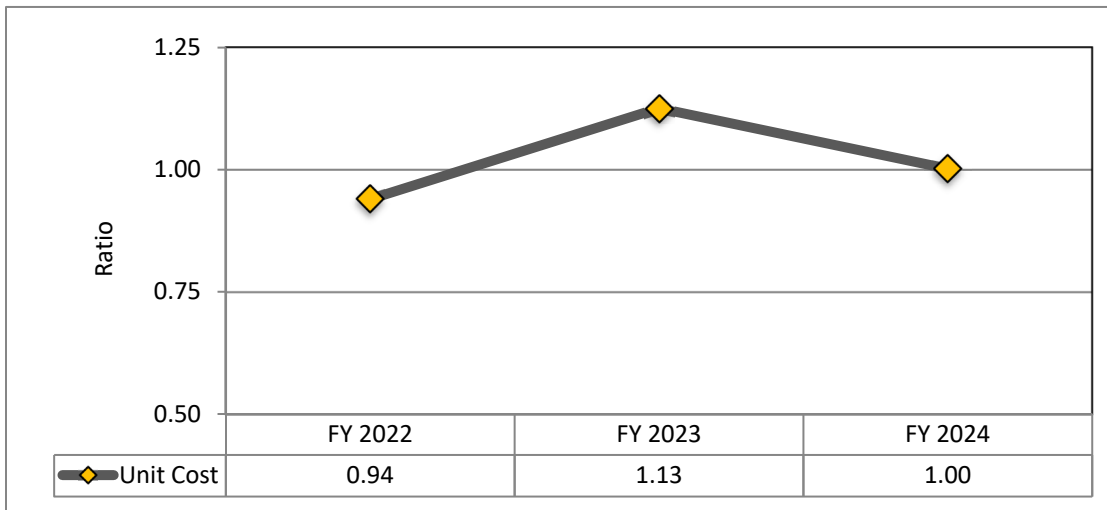
Table SM 2 – Cost Recovery Rate and Price Change

	FY 2022	FY 2023	FY 2024
Cost Recovery Rate (CRR)	23.4%	22.9%	19.6%
Price Change to Customer	8.1%	(0.3%)	(2.4%)

Unit Cost

The unit cost is a metric relating operating cost to each dollar of sales. Unit cost is calculated by dividing gross operating costs (the sum of total obligations and credit) plus depreciation expense (capital investment recovery) by gross sales. As recommended in Government Accountability Office (GAO) report 10-480, Army continues to evaluate and adjust the unit cost as necessary to support Overseas Operations. A unit cost below 1.0 indicates that the enterprise is selling and not replenishing thus reducing the contract authority requirement. A unit cost above 1.0 indicates the Army is purchasing inventory in anticipation of future need based upon inventory management forecasts or is replenishing inventory sold from previous years. After operating below a UCG of 1.0 in FY 2022, the FY 2023 UCG is set above 1.0 to help replenish inventory sold in both years. FY 2024 UCG is set to 1.0 to fully replenish FY 2024's projected sales and balance future readiness with forecasted cash affordability. Potential readiness impacts will be monitored and can be addressed through use of variability target to respond rapidly to unexpected variances in costs or customer demands during the year of execution. Chart SM 6 shows unit cost for FY 2022 through FY 2024.

Chart SM 6 - Unit Cost

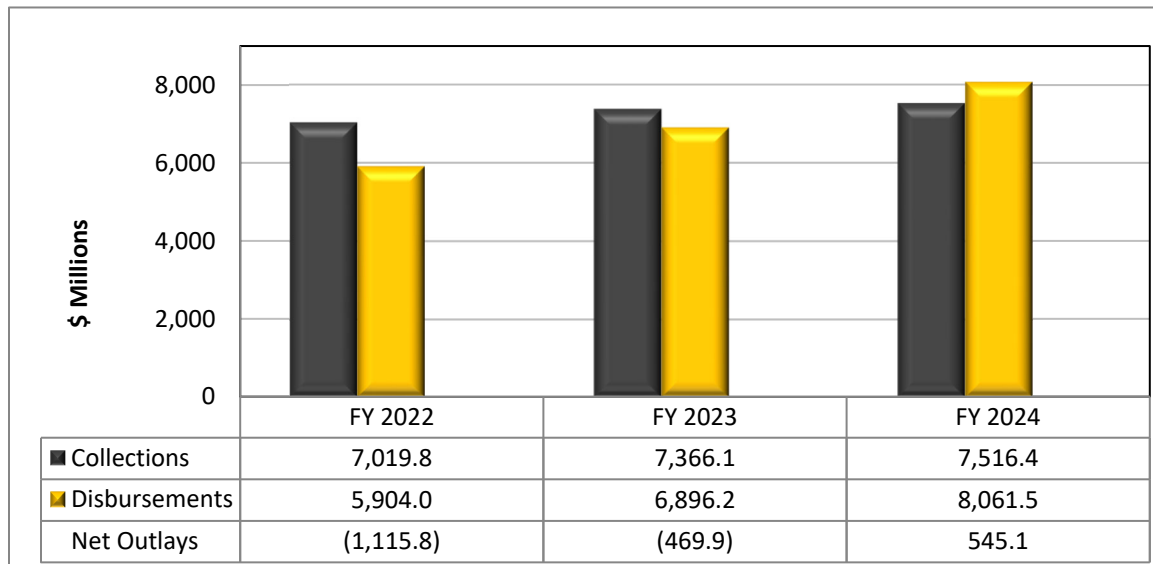


$$\text{Unit cost} = \frac{\text{Obligations} + \text{Credit} + \text{Depreciation expense}}{\text{Gross sales}}$$

Collections, Disbursements, and Outlays

Collections are projected based on sales and changes in accounts receivable. Disbursements are projected based on monthly operating expenses, changes in accounts payable, and Capital Investment Program obligations. Army forecasts increased collections due to an increase in sales projections in FY 2024. Disbursements are also projected to increase as higher contract authority requirements in FY 2023 and FY 2024 lead to increased materiel deliveries. The values in Chart SM 7 do not include direct appropriations or cash transfers into the AWCF.

Chart SM 7 – Cash Management

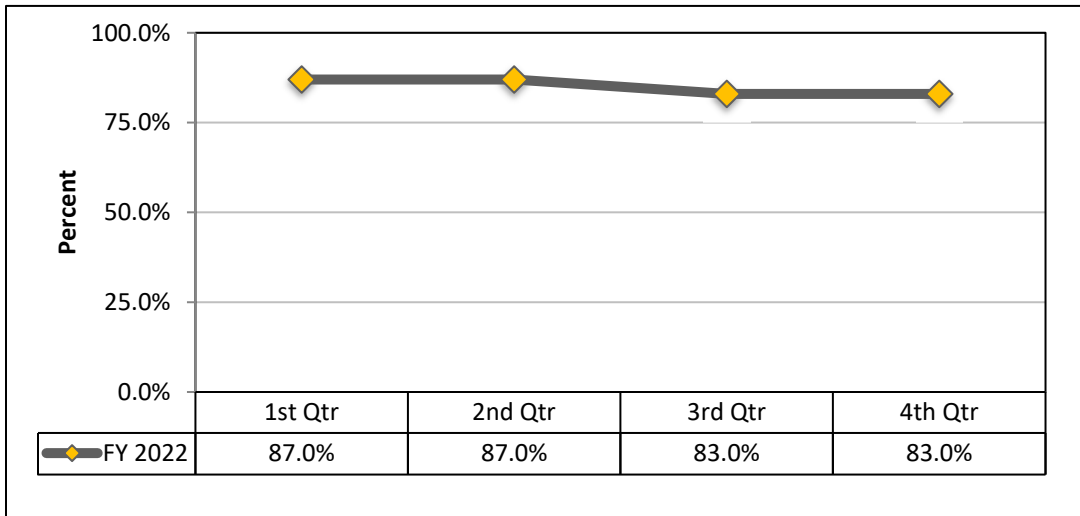


Performance Measurement

Stock Availability

Supplying and maintaining Army's equipment remain key components of readiness. The stock availability (SA) goal is a primary performance measure indicating the ability of the supply system to fill requisitions. The Army's goal is 85 percent of customer demands fulfilled immediately. SA is administered through adequate funding of hardware, proper management of the supply chain, and reliable oversight of materiel stockage requirements. Chart SM 8 displays SA at the end of fourth quarter falling to slightly below the 85 percent goal in FY 2022. The Army has requested an increase to contract authority to replenish inventory and prevent further declines in SA.

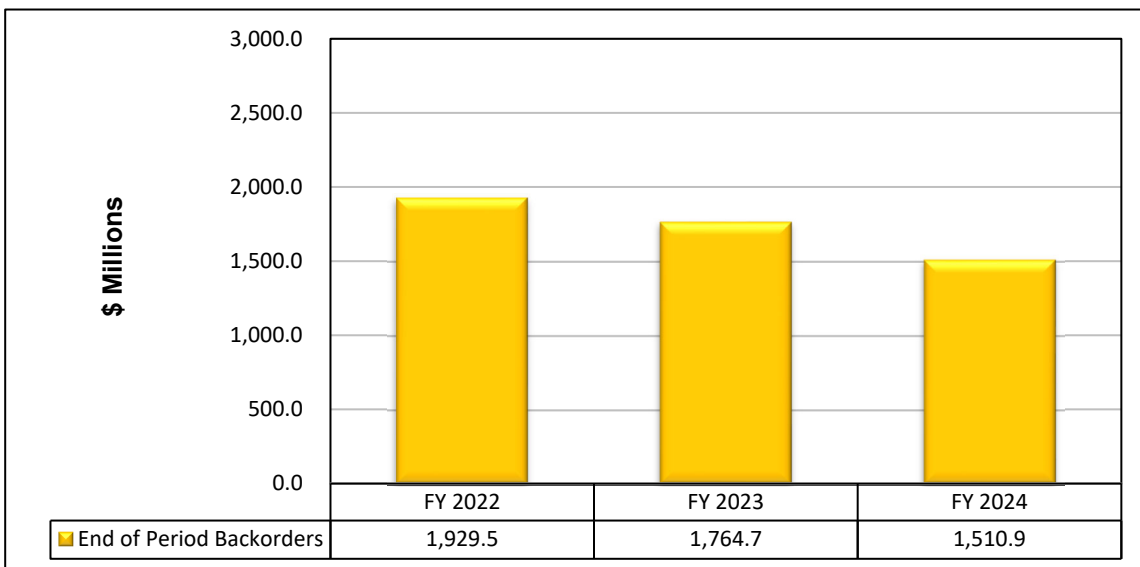
Chart SM 8 – Stock Availability (SA)



Customer Backorders

Backorders are expected to decrease in FY 2024 as materiel deliveries increase and allow Army to fill customer demand. Customer backorders for the end of each fiscal year are displayed on exhibit Fund 11, *Source of New Orders and Revenue*.

Chart SM 9 – Customer Backorders



Supply Management Workload

Table SM 3 below displays Supply Management workload drivers. The increases in requisitions received and issues completed are based on deployed force activity assumptions.

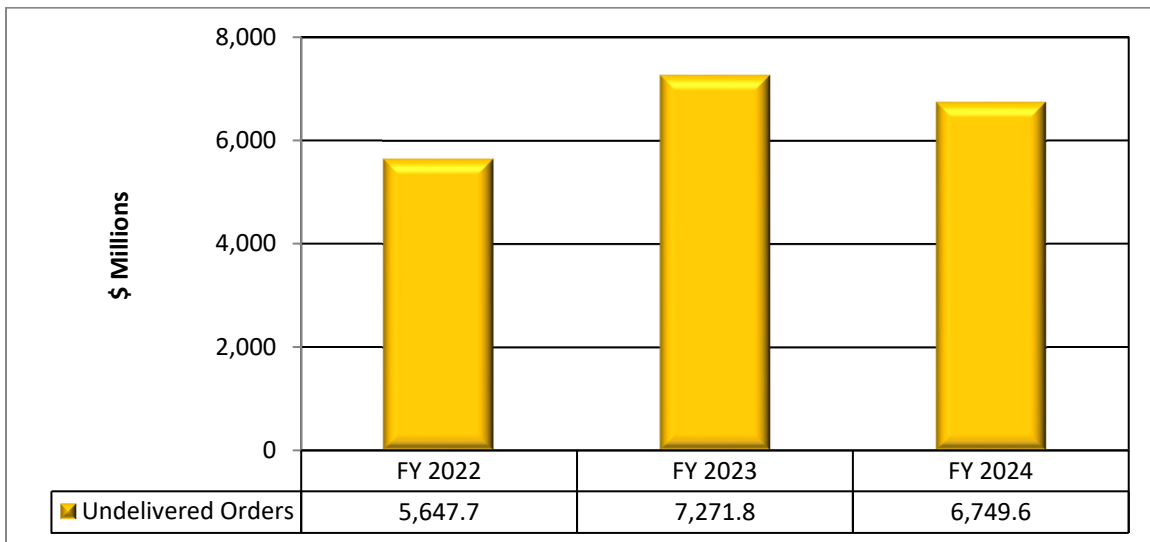
Table SM 3 - Supply Management Workload

Supply Management Workload	FY 2022	FY 2023	FY 2024
Items Managed	115,591	116,648	117,770
Requisitions Received	385,212	520,354	525,357
Issues Completed	643,390	692,575	705,883
Procurement Receipts	78,568	109,310	130,331
Contracts Awarded	6,519	12,430	10,650

Undelivered Orders

Undelivered orders represent goods and services ordered, but not yet received by AWCF. A sufficient cash balance is required to pay suppliers upon receipt of these orders. As shown in the chart below, undelivered orders are projected to increase in FY 2023 and decrease in FY 2024.

Chart SM 10 - Undelivered Orders



Appropriations

Army requests \$1.7 million for secondary items to support War Reserve equipment. War reserve equipment positioned without secondary items would significantly jeopardize Army's ability to complete its combat missions successfully. The secondary items purchased for war reserves support important combat weapon systems such as M2 Bradley Fighting Vehicle, artillery howitzers, rocket launchers, High Mobility Multipurpose Wheeled Vehicles (HMMWV), and Mine Resistant Ambush Protected (MRAP) Vehicles. The FY 2024 War Reserve request will only fund secondary items for Operational Project stocks and no longer support sustainment stock. SM 4, *Inventory Status* and SM 6, *War Reserve Materiel* exhibits displays War Reserve inventory. Exhibit Fund 14, *Revenue and Costs* displays requested Appropriations.

Table SM 4 - Appropriations

(\$ Millions)	FY 2022	FY 2023	FY 2024
War Reserve Secondary Items	30.1	1.5	1.7

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Revenue and Costs
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
Revenue			
AMI Sales	6,901.0	7,295.6	7,589.9
NAMM Sales	1,561.4	1,811.8	1,692.5
AMC MOB Sales	0.0	2.0	2.0
Total Gross Sales	8,462.4	9,109.3	9,284.4
Credit and Allowances	1,437.1	1,743.3	1,768.0
Net Sales	7,025.4	7,366.1	7,516.4
Other Income	30.1	1.5	1.7
War Reserve-Secondary Items	30.1	1.5	1.7
Inventory Augmentation - Spares - Base	0.0	0.0	0.0
Inventory Augmentation - Spares - OCO	0.0	0.0	0.0
Total Income:	7,055.5	7,367.6	7,518.1
Costs			
Cost of Materiel Sold from Inventory			
AMI	4,085.4	4,052.2	4,432.8
NAMM	1,561.2	1,810.3	1,691.0
AMC MOB	0.0	2.0	2.0
Total Cost of Materiel Sold from Inventory	5,646.6	5,864.5	6,125.8
Inventory Losses/Obsolescence	234.3	143.6	149.3
Salaries and Wages Total	286.3	331.2	343.3
Military Personnel Compensation & Benefits	0.2	0.2	0.2
Civilian Personnel Compensation & Benefits	286.1	330.9	343.1
Travel & Transportation of Personnel	1.0	3.5	3.5
Materiel & Supplies (For Internal Operations)	0.2	0.5	0.5
Equipment	0.1	2.1	2.1
Other Purchases from Revolving Funds	290.7	375.2	419.6
Transportation of Things	82.8	98.0	100.2
Capital Investment Recovery (CIR) - Capital	24.0	21.9	15.5
Printing and Reproduction	0.0	4.4	4.5
Advisory and Assistance Services	45.6	69.7	70.6
Audit Readiness (memo entry)	12.6	14.7	14.7
Financial Statement Audit (memo entry)	13.1	19.6	19.7
Rent, Communication, Utilities & Misc. Charges	0.0	0.0	0.0
Other Purchased Services	311.9	283.1	294.8
Total Expenses	6,923.3	7,197.6	7,529.6
Operating Result	132.1	169.9	(11.5)
Less Recovery of Prior Year Pricing Discrepancies	0.0	0.0	0.0
Other Changes Affecting NOR:			
Less Direct Funding	(30.1)	(1.5)	(1.7)
Adjustment for Non-Recoverable Expense	0.0	0.0	0.0
Net Operating Result	102.0	168.5	(13.2)
Prior Year AOR	(257.3)	(155.3)	13.2
Non-Recoverable AOR for Budget Purposes	0.0	0.0	0.0
Accumulated Operating Result	(155.3)	13.2	0.0

**EXHIBIT FUND-14
REVENUE AND COSTS**

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Source of New Orders and Revenue
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
1. New Orders			
a. Orders from DoD Components:			
Department of Army			
Operation & Maintenance, Army	6,052.3	6,182.5	6,219.9
Operation & Maintenance, ARNG	690.7	682.5	687.1
Operation & Maintenance, AR	148.1	123.8	124.9
Subtotal, O&M Army	6,891.2	6,988.9	7,031.9
 Aircraft Procurement	 47.2	 11.2	 11.0
Missile Procurement	2.4	0.0	0.0
Weapons & Tracked Combat Vehicles	50.4	50.1	51.0
Procurement of Ammunition	6.7	0.3	0.3
Other Procurement	63.1	70.9	72.1
Subtotal Procurement	169.9	132.5	134.5
 RDT&E	 42.9	 32.1	 32.3
BRAC	0.1	0.0	0.0
Family Housing	0.1	0.0	0.0
Military Construction	0.1	0.0	0.0
Chem Agents & Munitions Dest, Army	0.0	0.0	0.0
Other Army	6.3	2.6	2.6
Subtotal All Other Army	49.5	34.7	34.9
 Subtotal, Department of the Army	 7,110.6	 7,156.1	 7,201.3
 Department of Air Force O&M	 3.7	 222.7	 223.8
Department of Air Force Investment	0.0	0.0	0.0
Department of Navy O&M	21.0	91.3	91.0
Department of Navy Investment	0.0	0.0	0.0
US Marines O&M	51.0	57.6	57.5
US Marines Investment	0.0	0.0	0.0
Other Department of Defense	186.2	175.5	176.5
Subtotal Other DoD Services	261.9	547.0	548.9

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Source of New Orders and Revenue
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
b. Defense Working Capital Fund (DWCF)			
Industrial Operations, Army	761.2	751.6	742.5
Supply Management, Army	0.0	0.0	0.0
Supply Management, Air Force	238.7	21.7	22.1
Supply Management, Navy	71.4	7.7	7.9
Supply Management, Marine Corps	15.1	16.2	16.5
DECA	0.0	0.0	0.0
DFAS	0.0	0.0	0.0
DISA	0.0	0.0	0.0
DLA	13.3	0.0	0.0
TRANSCOM	0.0	0.0	0.0
Other	0.0	0.7	0.7
Subtotal DWCF	1,099.6	797.9	789.8
c. Total DoD	8,472.1	8,501.0	8,539.9
d. Other Orders:			
Other Federal Agencies	11.6	13.1	13.1
Trust Fund	0.0	0.0	0.0
Non Federal Agencies	0.0	0.0	0.0
Foreign Military Sales	425.1	430.4	477.5
Nonappropriated	0.0	0.0	0.0
Subtotal, Other Orders	436.7	443.5	490.6
1. Total New Orders	8,908.8	8,944.5	9,030.5
2. Carry-In Orders (Back Orders From Prior Years)	1,483.2	1,929.5	1,764.7
3. Total Gross Orders	10,391.9	10,874.1	10,795.3
4. Carry-Out Orders (-)	1,929.5	1,764.7	1,510.9
5. Gross Sales	8,462.4	9,109.3	9,284.4
6. Credit and Allowances (-)	1,437.1	1,743.3	1,768.0
7. Net Sales	7,025.4	7,366.1	7,516.4

**EXHIBIT FUND-11
SOURCE OF NEW ORDERS AND REVENUE**

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Supply Management Summary
(\$ in Millions)**

			Obligation Targets		
	Net Customer Orders	Net Sales	Operating (Contract Authority)	Direct Appropriation - Mobilization	Total
Non-Army Managed Items (NAMI)					
<i>FY 2022</i>	1,664.4	1,561.2	1,636.8	0.0	1,636.8
<i>FY 2023</i>	1,813.6	1,810.3	1,864.0	0.0	1,864.0
<i>FY 2024</i>	1,694.2	1,691.0	1,746.4	0.0	1,746.4
Army Managed Items (AMI)					
<i>FY 2022</i>	5,807.3	5,464.1	3,835.5	5.1	3,840.6
<i>FY 2023</i>	5,385.7	5,553.8	5,461.5	0.4	5,461.9
<i>FY 2024</i>	5,566.3	5,823.4	4,529.6	0.3	4,529.9
AMC Mobilization					
<i>FY 2022</i>	0.0	0.0	0.0	25.0	25.0
<i>FY 2023</i>	2.0	2.0	2.0	1.1	3.1
<i>FY 2024</i>	2.0	2.0	2.0	1.4	3.4
Total Hardware					
<i>FY 2022</i>	7,471.7	7,025.4	5,472.3	30.1	5,502.4
<i>FY 2023</i>	7,201.3	7,366.1	7,327.4	1.5	7,328.9
<i>FY 2024</i>	7,262.6	7,516.4	6,278.0	1.7	6,279.7
Cost of Operations (LOGOPS)					
<i>FY 2022</i>			1,018.5		1,018.5
<i>FY 2023</i>			1,167.7		1,167.7
<i>FY 2024</i>			1,239.0		1,239.0
Total Operating Authority					
<i>FY 2022</i>	7,471.7	7,025.4	6,490.8	30.1	6,520.9
<i>FY 2023</i>	7,201.3	7,366.1	8,495.1	1.5	8,496.6
<i>FY 2024</i>	7,262.6	7,516.4	7,517.1	1.7	7,518.7

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Supply Management Summary
(\$ in Millions)**

			Obligation Targets		
	Net Customer Orders	Net Sales	Operating (Contract Authority)	Direct Appropriation - Mobilization	Total
<i>Total Capital Obligations (CIP)</i>					
<i>FY 2022</i>			13.4		13.4
<i>FY 2023</i>			25.1		25.1
<i>FY 2024</i>			22.3		22.3
<i>Variability Target</i>					
<i>FY 2022</i>			0.0		0.0
<i>FY 2023</i>			2,000.0		2,000.0
<i>FY 2024</i>			2,000.0		2,000.0
Target Total					
FY 2022	7,471.7	7,025.4	6,504.2	30.1	6,534.3
FY 2023	7,201.3	7,366.1	10,520.3	1.5	10,521.7
FY 2024	7,262.6	7,516.4	9,539.4	1.7	9,541.1
Direct Appropriations					
<i>Mobilization - War Reserve Materiel</i>					
<i>FY 2022</i>				30.1	30.1
<i>FY 2023</i>				1.5	1.5
<i>FY 2024</i>				1.7	1.7
TOTAL DIRECT APPROPRIATIONS					
FY 2022				30.1	30.1
FY 2023				1.5	1.5
FY 2024				1.7	1.7

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Operating Requirements by Weapon System
(\$ in Millions)**

Weapon System	FY 2022		FY 2023		FY 2024	
	Obligations	NMCRS ¹	Obligations	NMCRS ¹	Obligations	NMCRS ¹
AH-64, Apache	336.2	5.0%	595.7	10.0%	425.9	10.0%
CH-47D, Chinook	521.1	4.0%	1,123.6	10.0%	693.4	10.0%
UH-60, Black Hawk	518.3	4.0%	718.6	10.0%	361.3	10.0%
OH-58D, Kiowa Warrior	3.8	0.0%	8.8	10.0%	5.7	10.0%
Other Aviation	178.7	N/A	327.2	N/A	232.7	N/A
MLRS	0.0	7.0%	0.3	<10.0%	0.7	<10.0%
Patriot	121.8	5.0%	264.3	<10.0%	213.0	<10.0%
Other Missile	36.8	N/A	38.2	N/A	28.9	N/A
Firefinder	0.0	0.0%	0.0	<10.0%	0.0	<10.0%
Night Vision Goggles	26.9	0.0%	30.6	<10.0%	35.8	<10.0%
SINCGARS	15.3	0.0%	14.2	<10.0%	18.5	<10.0%
Other Communications Electronics	351.0	N/A	321.2	N/A	282.6	N/A
FMTV	43.2	9.0%	64.3	<10.0%	56.8	<10.0%
HEMTT	43.7	9.0%	45.2	<10.0%	34.3	<10.0%
HMMWV	111.8	8.0%	50.8	<10.0%	10.3	<10.0%
M109, Paladin	55.3	11.0%	21.3	<10.0%	15.5	<10.0%
M198, Towed Howitzer	135.2	12.0%	38.4	<10.0%	41.6	<10.0%
M1A1, Abrams Tank	136.8	10.0%	465.2	<10.0%	442.4	<10.0%
M1A2, Abrams Tank (SEP)	128.7	12.0%	148.2	<10.0%	614.6	<10.0%
M2/M3, Bradley Fighting Vehicle	101.4	13.0%	325.7	<10.0%	179.1	<10.0%
Stryker	226.0	12.0%	240.6	<10.0%	251.5	<10.0%
Other Tank - Automotive & Armament	743.4	N/A	618.8	N/A	585.1	N/A
Subtotal:	3,835.5		5,461.5		4,529.6	
NAMM Hardware Contract Authority	1,636.8		1,864.0		1,746.4	
AMC-MOB Hardware Contract Authority	0.0		2.0		2.0	
Total:	5,472.3		7,327.4		6,278.0	

1: Non Mission Capable Rate Supply (NMCRS) represents the percent of time a weapon system is not mission capable due to lack of critical spare parts. The AWCF goals for NMCRS are: at or below 10% for ground and at or below 25% for aircraft. FY 2022 is actual data. FY 2023 and FY 2024 are the Army's goal for total weapon system readiness.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
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**Inventory Status
(\$ in Millions)**

FY 2022	TOTAL	Demand Based	Mobilization	Non-Demand Based
1. Inventory BOP	18,748.2	14,996.9	1,180.2	2,571.1
2. BOP Inventory Adjustments				
A. Reclassification (Memo)	0.0	0.0	0.0	0.0
B. Price Change Amount (Memo)	0.0	0.0	0.0	0.0
C. Adj. Inventory BOP	18,748.2	14,996.9	1,180.2	2,571.1
3. Receipts at Cost	4,872.1	4,842.7	29.4	0.0
4. Sales (Total from Schedule 6)	7,083.7	7,083.7	0.0	0.0
5. Inventory Adjustments				
A. Capitalization (+ or -)	(59.6)	(27.6)	0.0	(32.0)
B. Returns from Customers for Credit	1,437.1	1,437.1	0.0	0.0
C. Returns from Customers Without Credit	1,321.4	869.1	0.0	452.3
D. Returns to Suppliers (-)	(19.5)	(19.5)	0.0	0.0
E. Transfers to Property Disposal (-)	(350.5)	(46.7)	(0.4)	(303.4)
F. Issues/Receipts wo Reimbursements (+ or -)	(167.3)	(16.3)	0.0	(150.9)
G. Other	556.2	(269.9)	(200.4)	1,026.5
H. Total Adjustments	2,717.8	1,926.1	(200.8)	992.5
6. Inventory EOP	19,254.4	14,682.0	1,008.8	3,563.6
7. Inventory EOP (MAC)	19,254.4	14,682.0	1,008.8	3,563.6
A. Economic Retention (Memo)				0.0
B. Contingency Retention (Memo)				0.0
C. Potential DoD Reutilization (Memo)				3,563.6
8. Inventory on Order EOP (Memo)	5,647.7	5,556.8	90.9	0.0

Narrative: Column "Non-Demand Based" includes inventory that stratifies beyond the budget year, economic and contingency retention stock, and inventory excess to the approved acquisition objective.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Inventory Status
(\$ in Millions)**

FY 2023	TOTAL	Demand Based	Mobilization	Non-Demand Based
1. Inventory BOP	19,254.4	14,682.0	1,008.8	3,563.6
2. BOP Inventory Adjustments				
A. Reclassification (Memo)	0.0	0.0	0.0	0.0
B. Price Change Amount (Memo)	0.0	0.0	0.0	0.0
C. Adj. Inventory BOP	19,254.4	14,682.0	1,008.8	3,563.6
3. Receipts at LAC	5,703.4	5,693.6	9.8	0.0
4. Sales (Total from Schedule 6)	7,607.8	7,605.8	2.0	0.0
5. Inventory Adjustments				
A. Capitalization (+ or -)	0.0	0.0	0.0	0.0
B. Returns from Customers for Credit	1,743.3	1,743.3	0.0	0.0
C. Returns from Customers Without Credit	710.4	50.0	40.0	620.4
D. Returns to Suppliers (-)	0.0	0.0	0.0	0.0
E. Transfers to Property Disposal (-)	(710.4)	(50.0)	(40.0)	(620.4)
F. Issues/Receipts wo Reimbursements (+ or -)	0.0	0.0	0.0	0.0
G. Other	1.0	0.0	1.0	0.0
H. Total Adjustments	1,744.3	1,743.3	1.0	0.0
6. Inventory EOP	19,094.2	14,513.1	1,017.6	3,563.6
7. Inventory EOP (MAC)	19,094.2	14,513.1	1,017.6	3,563.6
A. Economic Retention (Memo)				0.0
B. Contingency Retention (Memo)				0.0
C. Potential DoD Reutilization (Memo)				3,563.6
8. Inventory on Order EOP (Memo)	7,271.8	7,125.5	146.2	0.0

Narrative: Column "Non-Demand Based" includes inventory that stratifies beyond the budget year, economic and contingency retention stock, and inventory excess to the approved acquisition objective.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Inventory Status
(\$ in Millions)**

FY 2024	TOTAL	Demand Based	Mobilization	Non-Demand Based
1. Inventory BOP	19,094.2	14,513.1	1,017.6	3,563.6
2. BOP Inventory Adjustments				
A. Reclassification (Memo)	0.0	0.0	0.0	0.0
B. Price Change Amount (Memo)	0.0	0.0	0.0	0.0
C. Adj. Inventory BOP	19,094.2	14,513.1	1,017.6	3,563.6
3. Receipts at LAC	6,800.2	6,796.3	3.8	0.0
4. Sales (Total from Schedule 6)	7,893.7	7,891.7	2.0	0.0
5. Inventory Adjustments				
A. Capitalization (+ or -)	0.0	0.0	0.0	0.0
B. Returns from Customers for Credit	1,768.0	1,768.0	0.0	0.0
C. Returns from Customers Without Credit	738.1	50.0	40.0	648.1
D. Returns to Suppliers (-)	0.0	0.0	0.0	0.0
E. Transfers to Property Disposal (-)	(738.1)	(50.0)	(40.0)	(648.1)
F. Issues/Receipts wo Reimbursements (+ or -)	0.0	0.0	0.0	0.0
G. Other	0.0	0.0	0.0	0.0
H. Total Adjustments	1,768.0	1,768.0	0.0	0.0
6. Inventory EOP	19,768.6	15,185.6	1,019.4	3,563.6
7. Inventory EOP (MAC)	19,768.6	15,185.6	1,019.4	3,563.6
A. Economic Retention (Memo)				0.0
B. Contingency Retention (Memo)				0.0
C. Potential DoD Reutilization (Memo)				3,563.6
8. Inventory on Order EOP (Memo)	6,749.6	6,543.1	206.6	0.0

Narrative: Column "Non-Demand Based" includes inventory that stratifies beyond the budget year, economic and contingency retention stock, and inventory excess to the approved acquisition objective.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**WAR RESERVE MATERIEL (WRM)
STOCKPILE (\$ in Millions)**

FY 2022	Total	WRM Protected	WRM Other
1. Inventory BOP	1,180.2	1,180.2	0.0
2. Price Change	0.0	0.0	0.0
3. Reclassification	0.0	0.0	0.0
4. Inventory Changes			
a. Receipts @ standard	29.4	29.4	0.0
(1) Purchases	29.4	29.4	0.0
(2) Returns from Customer	0.0	0.0	0.0
b. Issues @ standard	(0.4)	(0.4)	0.0
(1) Sales	0.0	0.0	0.0
(2) Returns to Suppliers	0.0	0.0	0.0
(3) Disposals	(0.4)	(0.4)	0.0
c. Adjustments @ standard	(200.4)	(200.4)	0.0
(1) Capitalizations	0.0	0.0	0.0
(2) Gains and losses	0.0	0.0	0.0
(3) Other Adjustments	(200.4)	(200.4)	0.0
5. Inventory EOP	1,008.8	1,008.8	0.0
STOCKPILE COSTS			
1. Storage	0.0		
2. Management	0.0		
3. Maintenance/Other	0.0		
Total Costs	0.0		
WRM BUDGET REQUEST (OBLIGATIONS AT COST)			
1. Additional WRM	30.1		
2. Replenishment WRM	0.0		
3. Repair WRM	0.0		
4. Assemble/Disassemble	0.0		
5. Other	0.0		
Total Request	30.1		

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**WAR RESERVE MATERIEL (WRM)
STOCKPILE (\$ in Millions)**

FY 2023	Total	WRM Protected	WRM Other
1. Inventory BOP	1,008.8	1,008.8	0.0
2. Price Change	0.0	0.0	0.0
3. Reclassification	0.0	0.0	0.0
4. Inventory Changes			
a. Receipts @ standard	49.8	49.8	0.0
(1) Purchases	9.8	9.8	0.0
(2) Returns from Customer	40.0	40.0	0.0
b. Issues @ standard	(38.0)	(38.0)	0.0
(1) Sales	2.0	2.0	0.0
(2) Returns to Suppliers	0.0	0.0	0.0
(3) Disposals	(40.0)	(40.0)	0.0
c. Adjustments @ standard	1.0	1.0	0.0
(1) Capitalizations	0.0	0.0	0.0
(2) Gains and losses	0.0	0.0	0.0
(3) Other Adjustments	1.0	1.0	0.0
5. Inventory EOP	1,017.6	1,017.6	0.0
STOCKPILE COSTS			
1. Storage	0.0		
2. Management	0.0		
3. Maintenance/Other	0.0		
Total Costs	0.0		
WRM BUDGET REQUEST (OBLIGATIONS AT COST)			
1. Additional WRM	1.5		
2. Replenishment WRM	2.0		
3. Repair WRM	0.0		
4. Assemble/Disassemble	0.0		
5. Other	0.0		
Total Request	3.5		

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
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**WAR RESERVE MATERIEL (WRM)
STOCKPILE (\$ in Millions)**

FY 2024	Total	WRM Protected	WRM Other
1. Inventory BOP	1,017.6	1,017.6	0.0
2. Price Change	0.0	0.0	0.0
3. Reclassification	0.0	0.0	0.0
4. Inventory Changes			
a. Receipts @ standard	43.8	43.8	0.0
(1) Purchases	3.8	3.8	0.0
(2) Returns from Customer	40.0	40.0	0.0
b. Issues @ standard	(38.0)	(38.0)	0.0
(1) Sales	2.0	2.0	0.0
(2) Returns to Suppliers	0.0	0.0	0.0
(3) Disposals	(40.0)	(40.0)	0.0
c. Adjustments @ standard	0.0	0.0	0.0
(1) Capitalizations	0.0	0.0	0.0
(2) Gains and losses	0.0	0.0	0.0
(3) Other Adjustments	0.0	0.0	0.0
5. Inventory EOP	1,019.4	1,019.4	0.0
STOCKPILE COSTS			
1. Storage	0.0		
2. Management	0.0		
3. Maintenance/Other	0.0		
Total Costs	0.0		
WRM BUDGET REQUEST (OBLIGATIONS AT COST)			
1. Additional WRM	1.7		
2. Replenishment WRM	2.0		
3. Repair WRM	0.0		
4. Assemble/Disassemble	0.0		
5. Other	0.0		
Total Request	3.7		

Industrial Operations

Introduction

The Industrial Operations activity group is comprised of thirteen government-owned and operated installation activities, each with unique core competencies. Industrial Operations promotes business-like behavior by relying on revenue from customers instead of direct appropriations to finance continuing operations. Customers purchase services from Industrial Operations activities. These services include, but are not limited to, repairing and upgrading equipment, producing weapons and munitions and storing and demilitarizing material. The goal for the Industrial Operations activity is to generate enough revenue to recover the full cost of operations while breaking even over the long term.

The core financial measures for Industrial Operations are the net operating result (NOR) and accumulated operating result (AOR). The NOR measures the activity's gain or loss within a single fiscal year and is used to monitor how closely the activity performs compared to its budget. The AOR measures the activity's accumulated gains and losses since the fund's inception. Rates are set during budget development to break even by bringing the AOR to zero over a budget cycle or deferring it to preserve the ability to stabilize the rate if workload is expected to decrease. This method returns accumulated gains through reduced rates and recovers accumulated losses through increased rates. The rates are set to:

- Recover the activity's costs such as payroll, supplies, contracts, equipment, inventory, depreciation, and maintenance
- Maintain a sufficient cash corpus to cover operating disbursements and six months of capital disbursements
- Break even over time
- Maintain a stable and foreseeable cost of doing business
- Reduce large fluctuations to the customer

The Industrial Operations activity relies heavily on customers funded by direct appropriations to support its operations. The activity synchronizes rates and budget assumptions with the appropriated funding levels of its customers. Reductions to customer appropriated funding requests impact the business by

Mission:

- ***Provide an organic industrial capability to conduct depot level repair and upgrade***
- ***Produce munitions and large caliber weapons***
- ***Store, maintain, and demilitarize materiel for the Department of Defense***

adversely affecting work loading decisions and projected staffing levels and may also affect equipment readiness of supported customers.

Efficiencies and Business Process Improvements

Cost efficiency is an inherent attribute of the AWCF. The revolving fund construct promotes total cost visibility, full cost recovery, and fosters a business-like, competitive atmosphere. In the same way that commercial businesses focus on their bottom-line profit, Industrial Operations (IO) activities focus on their Net Operating Result and other indicators to gauge the efficiency of their operations. To increase efficiency and maintain their competitive edge, Industrial Operations activities have been fully engaged in cost-cutting and business process improvement initiatives for many years. Industrial Operations customers ultimately garner the benefit of these efficiencies through reduced turn-around times, lower prices, and increased throughput. Examples of these initiatives include:



Pictured here is a UH-60 Black Hawk during a test flight at Corpus Christi Army Depot

- **Continuous Process Improvement (CPI):** The Army Materiel Command (AMC) has been aggressively embracing the concepts of Continuous Process Improvement (CPI) since 2002. CPI is an overarching concept, using many improvement tools, including Lean, Lean Six Sigma (LSS), Value Engineering (VE), Quality Management, and others, to positively impact manufacturing, maintenance, storage, distribution and those military operations executing these critical missions. AMC's Industrial Operations (IO) has 25 certified Lean Six Sigma Master Black Belts. Additionally, the Army Quality management mission now falls under AMC. The CPI and Quality management missions have been integrated, developing a program synergy which is mutually advantageous to both product and process improvements, as well as Army Quality program requirements. These CPI efforts resulted in LSS and VE financial benefits in excess of \$6 billion since FY 2007. These benefits come in the form of hard savings from budgeted programs, cost avoidances, and increased capacity (e.g., improved throughput), improving overall Army readiness. In addition, Army received the prestigious "Class A" certification for demonstrated excellence in Sales & Operations Planning (S&OP) processes. The IO activities either re-invest the financial benefits or pass them on to their customers in future budgets through lower rates.

- **International Organization for Standardization (ISO):** ISO is a worldwide federation of national standards bodies that independently audit and certify companies and organizations for conformance with established standards. The Industrial Operations activities currently hold 21 ISO certifications for Quality Management Systems, International Aerospace Quality Systems, Environmental Management Systems, and Occupational Safety and Health Administration Systems. AMC is in the process of adopting ISO 45001, the world's first international standard for occupational health and safety geared toward senior management. ISO 45001 has the ultimate goal of helping businesses provide a healthy and safe working environment for their employees and everyone else who visits the workplace. Currently, Tobyhanna Army Depot (TYAD) is the only installation ISO 45001 certified.
- **Adaptable Workforce Structure:** IO activities employ an adaptable workforce structure to maintain flexibility in response to shifting workload requirements. Activities adjust the size of their workforce through the use of contractor, term, and temporary personnel to accommodate changes in workload.
- **Safety Improvements:** Safety is a high priority throughout AMC and leads to better morale, increased productivity and reduced operational costs. IO activities continue to participate in the Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP) and currently have five IO activities with an OSHA VPP Star⁴ rating. These include Crane Army Ammunition Activity (CAAA), Letterkenny Army Depot (LEAD), McAlester Army Ammunition Plant (MCAAP), TYAD and Red River Army Depot (RRAD). VPP participants must maintain an effective safety and health management system that meets rigorous performance-based criteria and requires a total written commitment from labor to work safely.
- **Enterprise Resource Planning (ERP) Solutions:** The Logistics Modernization Program (LMP), an ERP solution, provides AMC and the Army with new and improved capabilities for logistics management and better cost performance while setting the stage for auditability. It provides real time updates and improved visibility of maintenance, production, and financial data when compared with legacy batch processes. It streamlines material/parts requisitioning and asset movements between Defense Logistics Agency (DLA) and the depots, improves visibility and accountability for inventory, improves collaboration in program planning,

⁴ The Star Program is designed for exemplary worksites with comprehensive, successful safety and health management systems. Companies in the Star Program have achieved injury and illness rates at or below the national average of the respective industries.

and shortens the time to accept and negotiate programs between the Life Cycle Management Commands (LCMCs), depots, and customers.

- **Energy and Water Savings Programs:** AMC has instituted a command wide policy to identify performance standards to reduce consumption of energy and water resources, achieve energy security, and comply with DOD goals and objectives. Savings are being realized through the use of advanced metering programs, energy management and control systems, and implementation of energy conservation measures. Longer term energy savings are expected from renewable energy sources. IO activities use a variety of funding sources for energy projects which reduce energy consumption, improve energy efficiency, and increase energy security. Available funding sources include: AWCF IO, Energy Conservation Investment Program (ECIP), and third-party financing via Energy Savings Performance Contracts (ESPC) and Utility Energy Services Contracts (UESC).
- **Modernization and Investments:** The FY 2024 President's Budget represents the first year of investments in the Army Organic Industrial Base outlined in the Secretary of the Army's approved fifteen-year OIB Modernization Implementation Plan (MIP). The Modernization Implementation Plan addresses requirements in depots, arsenals and ammunition storage and production facilities beginning in FY 2024 and continuing through FY 2038. The goal of the Modernization Implementation Plan is to modernize manufacturing and production systems, moving current production processes toward 21st century technology with increased automation and modern data systems to more efficiently process and exchange data.

Functional Description

The AWCF Industrial Operations includes five depots, three arsenals, two munitions production facilities, and three storage sites. These sites perform the following mission functions:

- Provides depot level maintenance, repair, and modernization of weapon systems and component parts
- Manufactures, renovates, and demilitarizes materiel
- Produces munitions and large caliber weapons
- Performs a full range of ammunition maintenance services for DOD and U.S. allies
- Performs ammunition receipt, storage, and issue functions

In addition to the mission functions, ten of the thirteen activities provide installation base support for both internal operations and tenant activities. Corpus Christi Army

Depot and Crane Army Ammunition Activity are tenants on Navy installations. The Rock Island Arsenal-Joint Manufacturing and Technology Center (RIA-JMTC) receives installation base support from the Army Installation Management Command (IMCOM) which, effective 1 March 2019, became a major subordinate command of Army Materiel Command (AMC).

Industrial Operations activities collaborate with the private sector through formal public-private partnership agreements to perform work or utilize facilities and equipment. Under authority granted by Title 10, United States Code, § 2474, these partnerships create opportunities for both the public and private sectors by capitalizing on each other's strengths and efficiencies. The benefits to the Army and its customers include: leveraging capacity; sustaining core maintenance capabilities; sharing of overhead costs; and enhancing technical expertise in the workforce. The benefits to private industry include access to specialized facilities, equipment, and processes, and stimulating local economies. Current public-private partnership agreements are held with companies such as the Boeing Company, General Dynamics Land Systems, Sikorsky Aircraft Corporation, and Honeywell International.



An M1A1 tank is being offloaded to an incoming railcar at Sierra Army Depot

The five hard-iron maintenance depots (Anniston, Corpus Christi, Letterkenny, Red River, and Tobyhanna) and Pine Bluff Arsenal, Rock Island Arsenal-Joint Manufacturing and Technology Center, Sierra Army Depot, Tooele Army Depot, and Watervliet Arsenal are designated as Centers of Industrial and Technical Excellence (CITE) for the performance of core⁵ maintenance workload in support of DOD and foreign allies. The CITE designation provides authority under Title 10, United States Code, § 2474 to partner with and lease facilities to industry on programs relating to core maintenance and technical expertise.

The Shingo Prize, administered by the Jon M. Huntsman School of Business at Utah State University, is the premier award for operational excellence world-wide. Since FY 2005, the Army Materiel Command has received 32 Shingo Prizes for various programs at its depots and arsenals, including eight at Red River Army Depot, seven at Tobyhanna Army Depot, nine at Letterkenny

⁵ Title 10, United States Code, § 2464. Core Logistics Capabilities - Government-owned and Government-operated equipment and facilities required to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements.

Army Depot, three at the Rock Island Arsenal-Joint Manufacturing and Technology Center, two at Anniston Army Depot and one at Corpus Christi Army Depot. This award recognizes industry leaders who promote world-class business and manufacturing processes that enable on-time delivery and customer satisfaction.

On-site examiners conduct Shingo Prize evaluations and score the following areas:

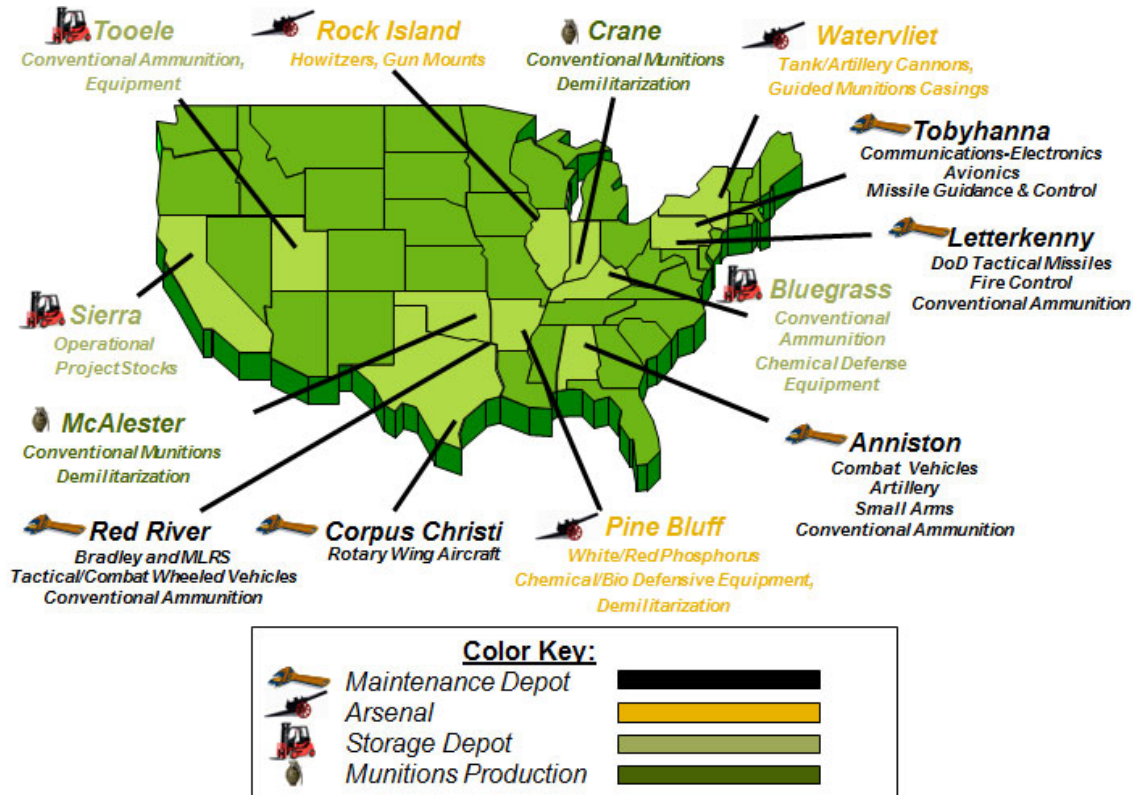
- Cost improvement
- Partnering practices
- Quality and results
- Innovation and development
- Environmental practices
- Vision and strategy
- Leadership & Empowerment
- Continuous improvement



Alaska Army National Guard Soldiers training on a UH-60 Black Hawk top-deck

Activity Group Composition

Figure IO 1 - Industrial Operations Activity Group Composition



Army Materiel Command is located in Huntsville, Alabama and serves as the management command for the Industrial Operations activity group. Installations or activities in this group fall under the direct command and control of the Life Cycle Management Commands each aligned in accordance with the nature of its mission. The following are descriptions of the Industrial Operations activities and their major core mission functions.

Anniston Army Depot (ANAD)

Location: Anniston, Alabama

2022 Workforce: 2,347



Description: A vital part of the community since opening in 1941, the depot's annual economic impact is estimated to be \$1.0 billion and indirectly supports over 25,000 jobs in the Anniston area. It is the only Army depot capable of performing maintenance on both heavy and light-tracked combat vehicles (with the exception of the Bradley), and their components. ANAD is the Center of Industrial and Technical Excellence (CITE)

for ground combat vehicles, assault bridging, small arms as well as towed and self-propelled artillery systems, and rail equipment and non-tactical generators. Combat vehicles include the M1 Abrams Tank, M113 Family of Vehicles (FOV), Stryker FOV, M109 Paladin, Field Artillery Ammunition Support Vehicle (FAASV), M88 Recovery Vehicles, Joint Assault Bridge (JAB), Assault Breacher Vehicle (ABV), Armored Vehicle Launched Bridge (AVLB), and M9 Armored Combat Earthmover. The depot is actively engaged in supporting Foreign Military sales across the globe. As an Army and Department of Defense leader in Public-Private Partnership efforts since 1993, the depot has established more than 80 different partnerships with industry leaders, utilizing agreements such as direct sales, work share, and facility use.

Blue Grass Army Depot (BGAD)

Location: Richmond, Kentucky

2022 Workforce: 828



Description: BGAD is a Strategic Mobility Power Projection ammunition depot with the mission to receive, store, issue, renovate, modify, maintain, and demilitarize conventional munitions for all DOD Services. BGAD stores and manages all Army Special Operations Forces ammunition. The depot is DOD's primary center for surveillance, receipt, storage, issue, testing, and minor repair of Individual Protection Chemical Defense Equipment. Additionally, BGAD maintains an Industrial Services capability providing receipt, storage, cutting, and fabrication of raw materials and metal parts for high visibility programs such as the Mine Resistant Ambush Protected (MRAP) family of vehicles. Anniston Munitions Center, located at Anniston Army Depot, is under the command and control of BGAD and serves as a multifunctional production facility, primary missile storage and maintenance depot, and as a storage and demilitarization depot for other conventional ammunition items.

Corpus Christi Army Depot (CCAD)

Location: Corpus Christi, Texas

2022 Workforce: 2,651



Description: CCAD returns Army rotary wing aircraft and components to full service with uncompromising quality, at the lowest cost possible in the shortest amount of time. CCAD supports the Joint Warfighter (Army, Marines, Navy, and Air Force) Department of Homeland Security and partner nations through the Department of State. CCAD leads the Army Aviation accident investigation processes with subject matter expertise and reliable laboratory analysis anywhere in the world by a team of highly skilled artisans who assess, evaluate and repair forward deployed aircraft and components to include depot forward capabilities. The depot supports Active, Reserve and National Guard Soldiers in their maintenance skills development with hands-on experience under the watchful

eyes of depot artisans. Designated as the Center of Industrial and Technical Excellence for rotary wing aircraft, CCAD supports the Apache, Black Hawk, Chinook, and Pave Hawk helicopters as well as Unmanned Aerial Vehicles (UAV).

Crane Army Ammunition Activity (CAAA)

Location: Crane, Indiana

2022 Workforce: 957



Description: CAAA is a Strategic Mobility Platform located in Crane, Indiana offering logistical support in receiving, storing, shipping, and surveillance of munitions. As a Munitions Center of Excellence, CAAA is the producer of pyrotechnic candle loads for mortar and artillery illumination in both the visible and infrared spectrums. CAAA supports the Navy with the production and renovation of advanced countermeasures for aircraft, and large caliber gun ammunition. Production and renovation capabilities include loading (cast and press) bombs and other munitions, missile warhead pressing, and a large variety of munitions components and assemblies. CAAA also has extensive demilitarization capabilities including steam out, high pressure washout, open burn/open detonation, and white phosphorous conversion. The CAAA machine center fabricates tools, dies, fixtures, gauges, production equipment and components. Letterkenny Munitions Center (LEMC), located on Letterkenny Army Depot in Chambersburg, Pennsylvania is under the command of CAAA. LEMC is also a Strategic Mobility Platform for both conventional ammunition and missile support. LEMC performs testing and minor repair for the Army Tactical Missile System and Guided Multiple Launch Rocket Missile systems, as well as several Air Force and Navy missile families. LEMC conducts demilitarization research and development, resource recovery and reutilization for missiles, container repair, and renovation of conventional munitions.

Letterkenny Army Depot (LEAD)

Location: Chambersburg, Pennsylvania

2022 Workforce: 1,229



Description: LEAD performs maintenance, modification, storage, and demilitarization operations on tactical missiles and ammunition. It has unique tactical missile repair capabilities supporting a variety of DOD missile systems including the Patriot and its ground support and radar equipment. LEAD is the designated Center of Industrial and Technical Excellence for air defense and tactical missile ground support equipment. In addition, it supports repair maintenance on a multitude of generators. LEAD also supports integration of Force Provider Soldier Support systems and provides installation support to attached organizations and assigned operating facilities.

McAlester Army Ammunition Plant (MCAAP)

Location: McAlester, Oklahoma

2022 Workforce: 1,572



Description: MCAAP is located on 45,000 acres in southeastern Oklahoma. It has six ammunition production, maintenance and renovation complexes and is a major ammunition storage site for all branches of the Armed Forces. Additionally, the plant has nearly 2,300 storage magazines and six million square feet of covered explosive storage space. MCAAP produces and renovates conventional ammunition, bombs, warheads, rockets, missiles, and ammunition-related components; performs engineering and product assurance in support of production; and receives, stores, ships, demilitarizes, and disposes of conventional and missile ammunition and related items.

Pine Bluff Arsenal (PBA)

Location: Pine Bluff, Arkansas

2022 Workforce: 590



Description: With a local economic impact exceeding \$140 million annually, PBA produces, renovates, and stores more than 70 different conventional ammunition products ranging in caliber from 40 mm to 175 mm. Specialties include production of munitions containing payloads for smoke, non-lethal, riot control, incendiary, illumination, and infrared uses. Designated the Center of Industrial and Technical Excellence for Chemical and Biological Defense Equipment, PBA provides maintenance, upgrade, storage, and mission support for various mobile and powered Soldier support systems. PBA has strengthened its expertise by forming Public-Private Partnerships with mission related entities in the ammunition and chemical biological defense business sectors.

Red River Army Depot (RRAD)

Location: Texarkana, Texas

2022 Workforce: 1,403



Description: RRAD's mission is to conduct ground combat and tactical systems sustainment maintenance operations, and related support services worldwide for the Army, other DOD components, and allied nations. RRAD is the Center of Industrial and Technical Excellence for the Bradley Fighting Vehicle (BFV), Multiple Launch Rocket System (MLRS), Tactical Wheeled Vehicles (light, medium, heavy, all size trailers), Small Emplacement Excavator (SEE), and rubber products. Other supported systems include Army boats and bridges, cranes, material handling equipment, egress trainers, and a multitude of secondary items such as engines

and transmissions. Red River Army Depot (RRAD) continues to support high levels of production for the Mine Resistant Ambush Protected (MRAP) All Terrain, Cougar, and MaxxPro vehicles to support fielding schedules for TACOM and the Marine Corps. RRAD specializes in forward deployment of maintenance operations in support of U.S. and allied military operations and will project training and operations in support of Foreign Military Sales. The depot continuously engages in best business practices and process improvements designed to maximize quality throughput at optimal cost. RRAD supports operational transformation in alignment with its strategic plan with an eye to flexible solutions that will attract future business.

Rock Island Arsenal-Joint Manufacturing and Technology Center (RIA-JMTC)

Location: Rock Island Arsenal, Illinois

2022 Workforce: 772



Description: RIA-JMTC is a heavy-metal manufacturer that specializes in artillery, weapon components, armor and mobile maintenance systems. RIA-JMTC is currently producing the M997A3 Ambulance, Line of Communication Bridge (prototype), Metalworking and Machining Shop Set, and manufacturing artillery parts, gun mounts, recoil mechanisms, small arms repair parts, aircraft weapon sub-systems, and weapons simulators. RIA-JMTC is the only multi-purpose and vertically integrated metal manufacturer in DOD and is a designated Center for Industrial and Technical Excellence for mobile maintenance systems, Add-on-Armor design, development, and prototype fabrication, and foundry operations. The center possesses the unique technical expertise and equipment to manufacture high quality and sustainable products. In May 2019 RIA-JMTC reached initial operating capability as the Center of Excellence for Advanced and Additive Manufacturing. In 2020 RIA-JMTC initiated a pilot program to partner with Digital Manufacturing and Design Innovation Institute (DMDII) to drive the digital future of manufacturing within Army.

Sierra Army Depot (SIAD)

Location: Herlong, California

2022 Workforce: 1,096



Description: SIAD is a recognized multi-functional installation that provides rapid expeditionary logistics support and long-term sustainment solutions to the Army and the Joint Force. SIAD is designated by the Department of the Army as the Center for Industrial Technical Excellence (CITE) for all Petroleum and Water Distribution Systems (PAWS). In addition, SIAD is the redistribution point for containers of secondary items returning from Southwest Asia and provides equipment receipt and asset visibility for these items. SIAD has also been

designated as the Army's main consolidation and redistribution center for the Clothing Management Office (CMO) to perform Brigade-level Organizational Clothing and Individual Equipment Reset operations. These unique operations clearly provide a readiness and operational value to the Army and the Nation through management and controlled redistribution of equipment to meet urgent demands and support to deploying Soldiers.

Tobyhanna Army Depot (TYAD)

Location: Tobyhanna, Pennsylvania

2022 Workforce: 2,501



Description: TYAD is designated as the Center of Industrial and Technical Excellence for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), electronics, avionics, and missile guidance and control. TYAD's capabilities include full-spectrum logistics support for electronics sustainment, overhaul and repair, fabrication and manufacturing, engineering design and development, systems integration, technology insertion, modification, Foreign Military Sales, and Global Field support to our Joint Warfighters. It provides installation support to attached organizations and assigned operating facilities.

Tooele Army Depot (TEAD)

Location: Tooele, Utah

2022 Workforce: 440



Description: TEAD provides America's joint fighting forces with munitions and Ammunition Peculiar Equipment (APE) in support of military missions before, during, and after any contingency. The depot receives, stores, issues, renovates, modifies, maintains, and destroys conventional munitions for all of DOD. TEAD is designated as the Center of Industrial and Technical Excellence for APE. AES was integrated into LMP beginning in FY 2017. TEAD is the life cycle engineering depot for design, development, manufacturing and fielding of munitions systems and APE throughout the world.

Watervliet Arsenal (WVA)

Location: Watervliet, New York

2022 Workforce: 730



Description: WVA produces armaments, mortars, recoilless rifles, howitzers and is recognized as the premier cannon-maker for the Army. This includes all life cycle support elements from research and development through prototype, manufacturing, testing support, legacy system support, and technical expertise. The guns manufactured at WVA

provide the firepower for the Army’s main battlefield tank, the M1A1 Abrams. WVA has established several unique and valuable partnerships with manufacturing industries resulting in increased workload, absorption of excess capacity, industry supplied capital improvements, cost sharing, and has gained American Bureau of Ship Building certification for WVA’s forging process.

Budget Highlights

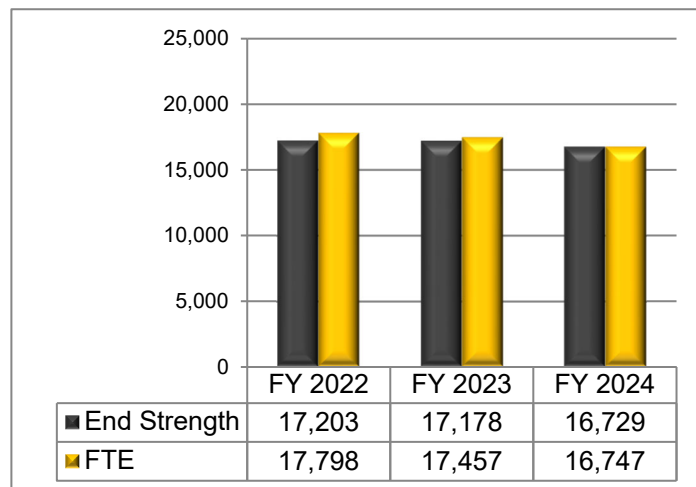
Assumptions

The budget reflects workload assumptions developed in coordination with customers and incorporates historical trend analysis when developing future workload requirements. However, as unit rotations and weapon system delivery schedules shift, annual projections can change significantly between when budgets are developed and actual maintenance occurs. To offset these risks, the Industrial Operations activity remains poised to increase or decrease output to accommodate customers’ changing requirements.

Personnel

Civilian end-strength represents the number of personnel employed at the end of each fiscal year. Full time equivalents represent the manpower level of effort necessary to accomplish the projected workload on an annual basis. The Industrial Operations labor pool includes a mix of permanent, temporary, and term-appointed employees, in addition to contract labor, which allow for workforce flexibility to accommodate changing requirements.

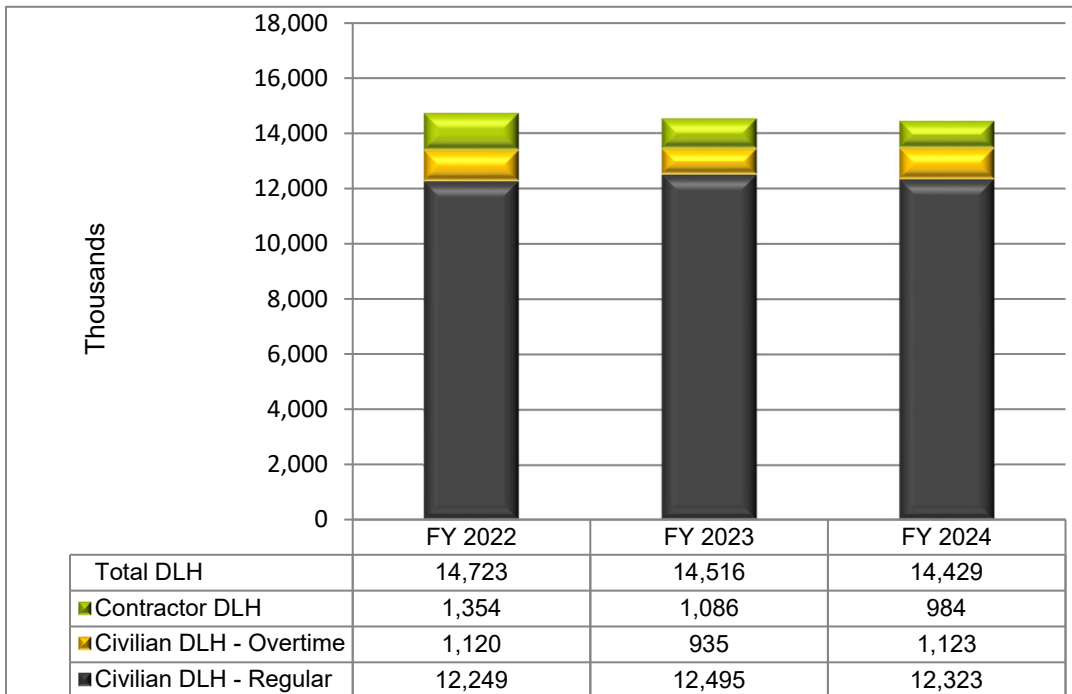
Chart IO 1 – Personnel (excludes contractors)



Maintaining a trained and ready workforce is critical to this labor intensive business. Industrial Operations activities engage in various workforce revitalization efforts to include interns, apprenticeship programs and a Pathways program which offers clear paths to Federal internships for students from high school through post-graduate school and to careers for recent graduates. Due to the specialized nature of the work and skill level requirements, training may require two to three years before an employee is able to perform specific tasks without supervision. In addition to civilian personnel, 24 military personnel are assigned to Industrial Operations (IO) activities in FY 2024.

Direct Labor Hours (DLH)

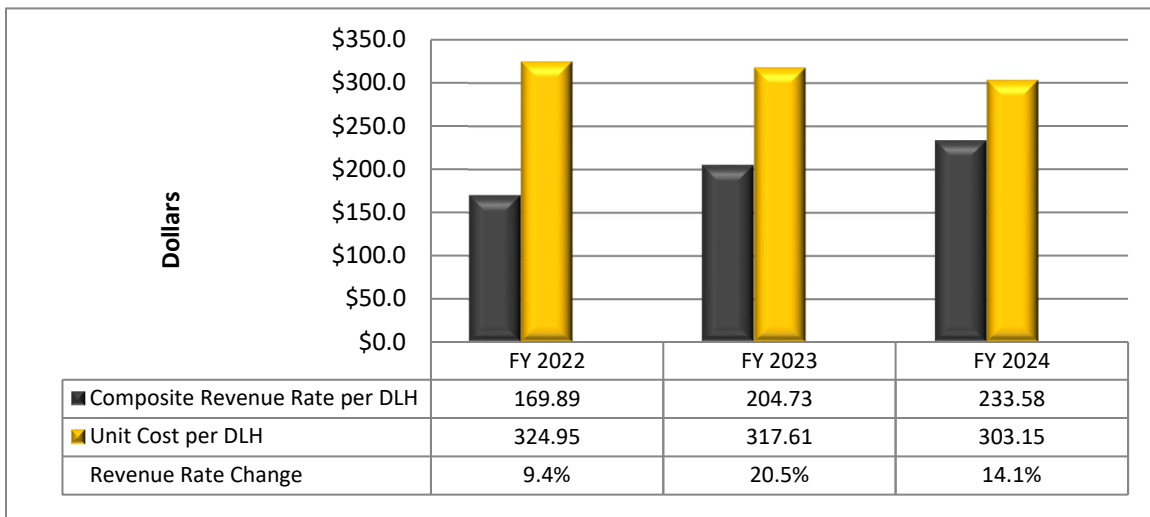
Chart IO 2 - Direct Labor Hours



Total direct labor hours represent the number of hours required to complete the Industrial Operations direct mission workload. Direct labor hours decrease proportionately with the expected decline in workload. IO activities remain prepared to increase overtime and contractor DLHs in the event workload estimates increase.

Direct Labor Hour Rate

Chart IO 3 - Direct Labor Hour Rate

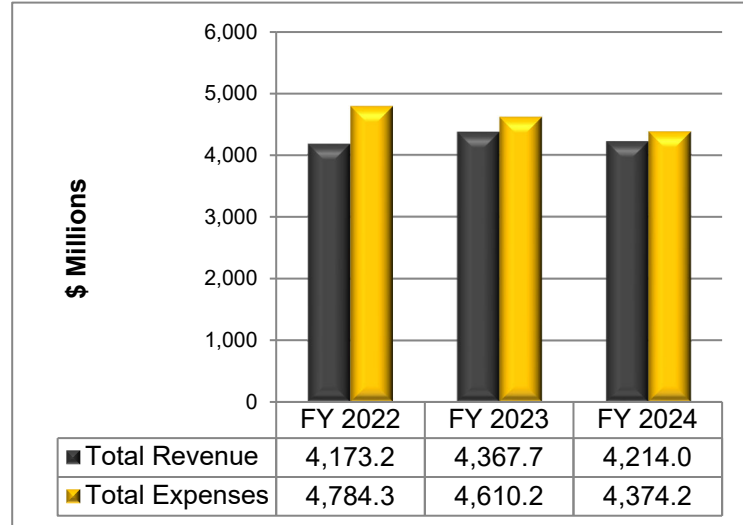


The composite revenue rate is an aggregate hourly rate established in the budget cycle and used to price rate-stabilized workload. It is comprised of direct labor and material costs, overhead costs (mission indirect and non-mission indirect costs) and accumulated operating result adjustments that are designed to return gains or recover losses. In contrast to rate-stabilized workload, cost reimbursable workload represents workload that is prototype in nature or has very little repair history. It is not included in the stabilized rate calculation until sufficient repair information has been established. The composite revenue rate calculation is complex and influenced by several factors: 1) commodity mix of the workload planned (labor intensive, material intensive or both); 2) the amount of gains to be returned or losses to be recovered over the budget years; 3) the amount of stabilized direct labor hours available to return gains or recover losses; and 4) the number of total direct labor hours available to distribute overhead cost (stabilized and non-stabilized workload). A change to the composite revenue rate directly affects the total revenue and new order values for the budget year. While the Army has been able to maintain a stabilized rate for several years, another increase as well as a cash infusion are necessary to maintain solvency as the Army brings the business more in line with current operations and escalating prices. The FY 2024 rate increases to \$233.58, bringing the rate closer to a self-sustaining level of operations as the business right sizes workforce to workload. Unlike the composite revenue rate, which is adjusted for AOR and applied to new rate stabilized workload, the unit cost per direct labor hour represents total costs of work performed on both prior year and current year orders. The unit cost does not include adjustments for AOR.

Revenue and Expenses

The Industrial Operations revenue amount represents earnings from work performed on customer equipment plus any direct appropriations designated to IO. Total expenses cover full costs, including material, labor, storage, and other direct or indirect costs associated with the products or services being provided. Revenue and expenses are displayed in more detail on Exhibit Fund 14, *Revenue and Costs*.

Chart IO 4 - Revenue and Costs



Operating Result

The Net Operating Result (NOR) represents the difference between revenue and expenses within a fiscal year. The recoverable NOR in FY 2022 and FY 2023 includes \$115 million in direct appropriations provided to maintain competitive rates at the three arsenals. In addition, in FY 2022, FY 2023 and FY 2024 the recoverable NOR includes \$26.9 million, \$28.4 million, and \$27.6 million respectively, for Industrial Mobilization Capacity (IMC) costs associated with maintaining facilities to meet mobilization or war surge capacity. The Accumulated Operating Result (AOR) represents the summation of all operating gains or losses since activity group inception along with any prior period adjustments. The Recoverable NOR and AOR are displayed in the following table and on Exhibit Fund 14, *Revenue and Costs*.

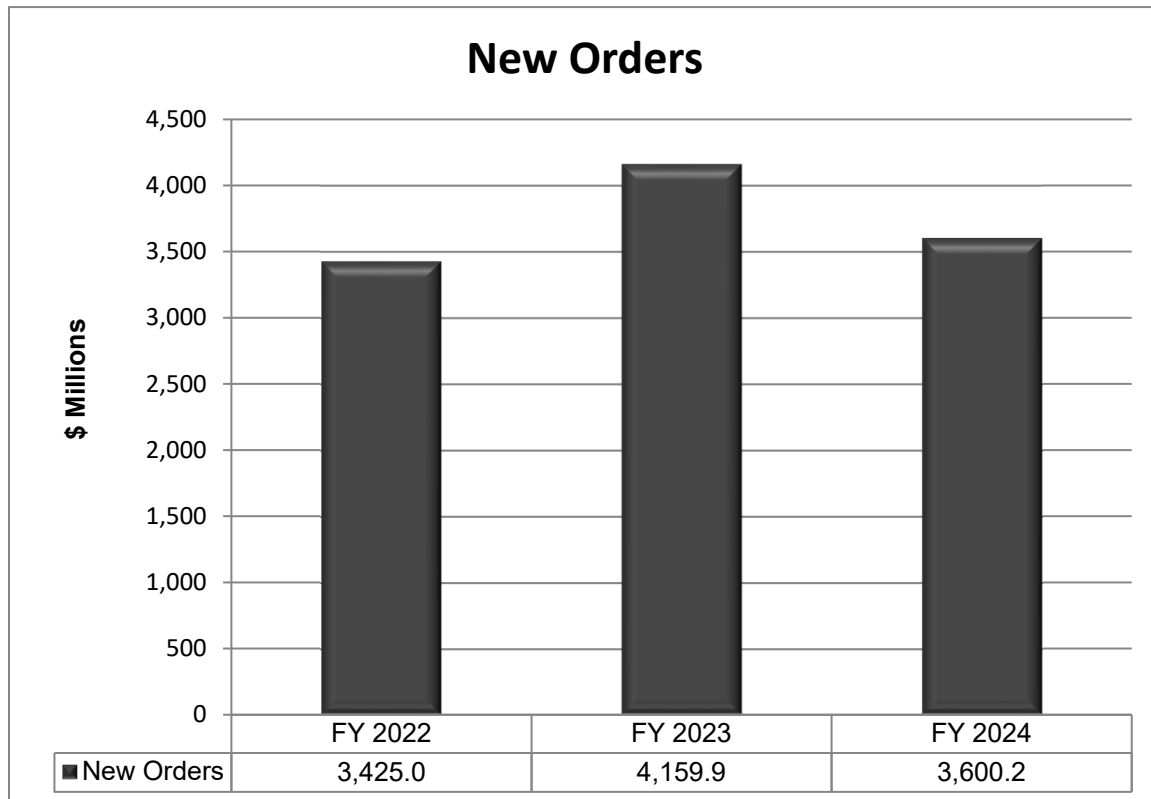
Table IO 1 - Operating Results

(\$ Millions)	FY 2022	FY 2023	FY 2024
Recoverable Net Operating Result	12.4	23.6	(73.4)
Accumulated Operating Result	49.9	73.4	0.0

New Orders

Industrial Operations activities develop workload projections based on close coordination with customers and their delivery schedule requirements. With fluid requirements and fiscal uncertainty, accurately predicting workload two to three years in advance has proven difficult. Expected workload to aid Ukraine in FY 2023 increased the anticipated new orders with slightly lower amounts estimated for FY 2024. The budget includes workload assumptions associated with base program requirements and anticipated Reset workload. The Reset program ensures Army equipment is restored to a level of combat capability commensurate with a unit's future mission. The projected workload in FY 2024 is commensurate with customer projections and budgeted depot maintenance requirements. Exhibit Fund 11, *Source of New Orders and Revenue*, displays total new order estimates by fund category.

Chart IO 5 - New Orders



Carryover

Carryover, or unfilled orders, represents the dollar value of the production orders (parts, labor, and overhead) that have been ordered and funded by customers but not completed by the industrial activities at the end of each fiscal year. Some carryover is necessary; it leads to better planning, better decision making, and cost efficiencies at the depots and arsenals. It provides lead time to assemble necessary workforce skill sets, to establish supply chains, and to coordinate workload routing. Carryover also prevents production line stoppages and ensures the activities have funded work to provide a smooth transition between fiscal years.

The FY 2023 National Defense Authorization Act (NDAA) included a provision to modify current DOD policy which applies a material end of period exclusion for Army carryover workload. The DOD policy recognizes 5-7 months of carryover workload as optimal to ensure a smooth flow of maintenance work between fiscal years. Conversely, less than 3 months of carryover workload could pose execution challenges that put production continuity at risk. For FY 2024, the Army expects to end the fiscal year with 5.2 months of carryover when the NDAA exclusion is applied. The Army continues to improve carryover management and meet carryover policy requirements through improved workload planning, acceptance, and execution.

Managing Carryover

The Army is focused on reducing carryover by leveraging policy and process improvements aimed at increasing production, improving customer-provider communication, and strengthening controls over the acceptance of new orders. These initiatives were developed in response to the Government Accountability Office's FY 2013 carryover audit recommendations. The policy for accepting new workload requires:

- The customer and the executing industrial activity to assess the *availability of skilled labor* to execute the workload
- The viability of the *supply chain and availability of parts*
- The availability of *tools and equipment needed during production*
- The availability of *unserviceable assets*
- The scheduled *requirements per month*
- The availability of *funding to support the production*

All AWCF activities have fully implemented these criteria for accepting new orders. Additionally, Army program acquisition managers are required to identify organic procurement funded requirements to the appropriate Life Cycle Management Command (LCMC) no later than the end of the first quarter of the year of execution. The Army's goal is to ensure procurement funded depot maintenance workloads are inducted into the depots no later than the end of the second quarter of

the fiscal year. The intent is to reduce orders placed late in the fiscal year that increase carryover.

Army leadership is committed to monitoring carryover and production goals on a recurring basis through senior leader forums. The Army plans to reduce carryover by \$558 million at the end of FY 2024. Carryover, Revenue and New Orders as they are displayed on the Exhibit Fund 11, *Source of New Orders and Revenue*, and Exhibit Fund 11a, *Carryover Reconciliation*.

Chart IO 6 - New Orders and Carryover

Carryover Calculation Categories	FY 2022	FY 2023	FY 2024
1. Total New Orders	3,425.0	4,159.9	3,600.2
2. Net Carry-in Orders	4,192.0	3,580.3	3,368.3
3. Total Gross Orders (Lines 1 + 2)	7,617.0	7,740.2	6,968.5
4. Revenue	3,879.8	4,224.3	4,186.4
5. Carryout (Line 3- (Line 4+ Line 5A))	2,377.7	2,255.7	1,820.1
5A. Material End of Period Exclusion	1,359.5	1,260.2	962.0
6. Workload Completed per Month (Line 4 ÷ 12)	323.3	352.0	348.9
7. Months of Carryover (Line 6 ÷ Line 7)	7.4	6.4	5.2
< 3 Months	3-5 Months	5-7 Months	7-8 Months
			> 8 Months

Note: No Differentiating Impacts on FY 2023 from the carryover issue

Performance Measurements

Performance measurements for the Industrial Operations activity group include Recoverable Net Operating Result (NOR) and Productive Yield. FY 2022 actual results and projections for FY 2023 and FY 2024 are shown in the following table.

A cash realignment from Supply Management to Industrial Operations is necessary in FY 2023 to prevent a large rate swing in FY 2024. In addition, a direct appropriation for the Arsenal Sustainment Initiative in FY 2023 provided \$115 million to assist with maintaining competitive rates. In FY 2024, the composite rate is set to return \$73.4 million.

Table IO 2 - Performance Measurements

Measurements/Goals	FY 2022	FY 2023	FY 2024
Recoverable Net Operating Result	12.4	23.6	(73.4)
Productive Yield	1,401	1,475	1,515

Productive Yield represents the average number of regular direct labor hours for each full-time equivalent position involved in production and is an indicator of whether direct labor employees can support projected workload. The historical goal for productive yield has been 1,615 direct labor hours per work position and

represents total available work hours after holidays, leave, and training are removed. The productive yield projections for all years are below the expected parameters as workforce is sized to workload in FY 2023 and FY 2024.

Appropriations

The Industrial Operations (IO) activity received Direct Appropriations of \$115 million in both FY 2022 and FY 2023 to maintain competitive rates at the Army's arsenals. The Army requests \$27.6 million for Industrial Mobilization Capacity (IMC) in FY 2024. IMC funding sustains industrial base equipment required for mobilization that is idle for more than 80 percent in any one month but used at least once during the year. Army Organic Industrial Base (OIB) workload has steadily declined over the past ten years resulting in some equipment being utilized at these lower rates. The Army requires IMC funding to sustain this equipment, enabling the OIB to rapidly surge in support of a future mobilization.

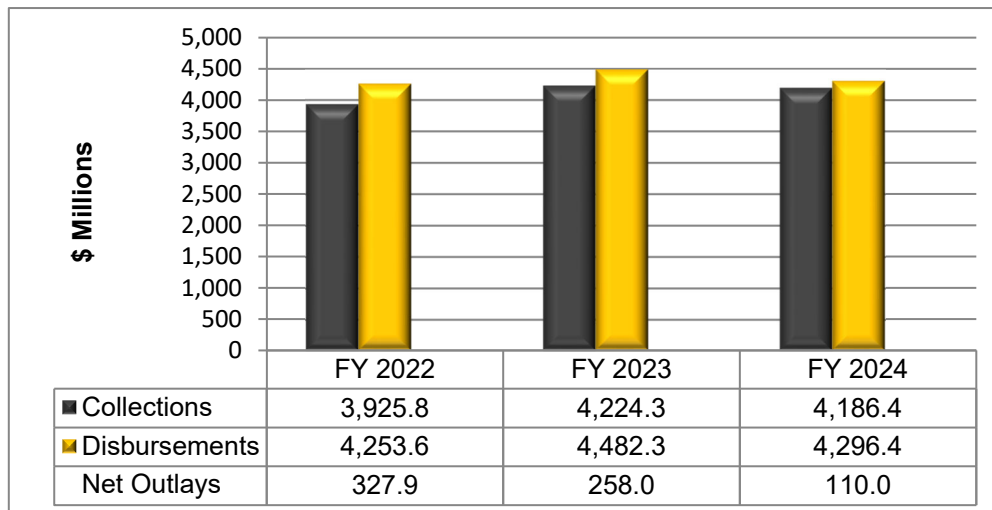
Table IO 3 – Appropriations

(\$ Millions)	FY 2022	FY 2023	FY 2024
Arsenal Sustainment Initiative	115.0	115.0	0.0
Industrial Mobilization Capacity	26.9	28.4	27.6
Total Appropriated Funds	141.9	143.4	27.6

Collections, Disbursements, and Outlays

Collections are calculated based on projected revenue and changes in accounts receivable. Disbursements are projected based on monthly operating expenses, changes in accounts payable, and Capital Investment Program obligations. Net outlays reflect the return of accumulated operating result to customers.

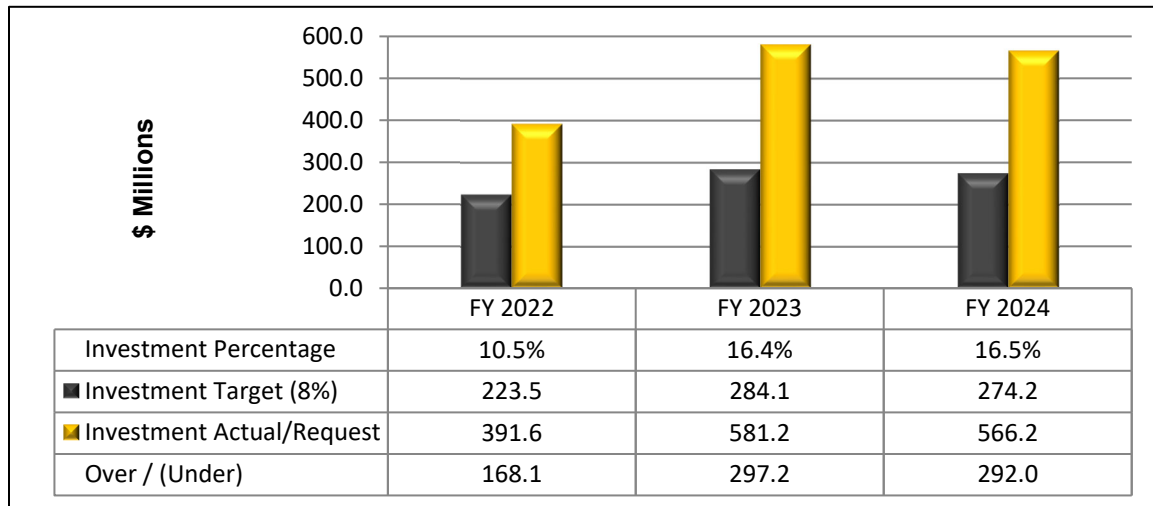
Chart IO 8 - Cash Management



Minimum Capital Investment Requirement

The National Defense Authorization Act (NDAA) for FY 2023 continues the supportive effort to modernize the Army's infrastructure and increases the amount of investment required by the five Army maintenance depots (Anniston, Red River, Letterkenny, Tobyhanna, and Corpus Christi), the three arsenals (Rock Island, Pine Bluff, and Watervliet) and Tooele Army Depot to the equivalent of at least eight percent of funded workload beginning in FY 2023. The NDAA also requires at least two percent of the total investment be from Facilities Sustainment, Restoration, and Modernization (FSRM) projects. In addition to equipment modernization efforts and process improvements, over \$430 million is dedicated towards facility planning, design, and construction at five of the locations across the budget years.

Chart IO 9 – Minimum Capital Investment Requirement



The chart displays the total investment target and total investment amount planned. Since the minimum capital investment became law, the Army has invested over \$4.9 billion. Industrial Operations (IO) activities review future production and infrastructure requirements and project return on investment when developing capital budgets. The Army is committed to meeting the investment requirement of eight percent beginning in FY 2023. Exhibit Fund 6, *Minimum Capital Investment Requirement* provides investment details by category for each activity.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Changes in Cost of Operations
(\$ in Millions)**

		Costs
FY 2022 Actual		4,784.3
FY 2023 Estimate in President's Budget		4,276.3
Pricing Adjustments		57.6
FY 2022 Pay Raise	(1.2)	
-Civilian Personnel	(1.2)	
-Military Personnel	0.0	
Materials and Supplies	43.6	
Other	15.3	
Productivity Initiatives and Other Efficiencies		0.0
Lean Program	10.9	
Value Engineering Program	5.1	
Reinvestment of Lean savings (-)	(16.0)	
Program Changes		276.3
Labor	(111.4)	
Travel	8.3	
Material	385.0	
Equipment	37.2	
Transportation	(0.9)	
Depreciation	0.2	
Advisory and Assistance Services	5.6	
Other Purchased Services	(18.7)	
Other	(28.9)	
FY 2023 Current Estimate		4,610.2
Pricing Adjustments		148.4
FY 2023 Pay Raise	91.9	
-Civilian Personnel	91.7	
-Military Personnel	0.2	
Materials and Supplies	26.3	
Other	30.1	
Productivity Initiatives and Other Efficiencies		(0.0)
Lean Program	10.6	
Value Engineering Program	6.1	
Reinvestment of Lean savings (-)	(16.7)	
Program Changes		(384.4)
Labor	(62.1)	
Travel	(1.4)	
Material	(217.9)	
Equipment	(36.5)	
Transportation	(0.6)	
Depreciation	(4.5)	
Advisory and Assistance Services	13.4	
Other Purchased Services	(68.3)	
Other	(6.5)	
FY 2024 Budget Estimate		4,374.2

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Minimum Capital Investment Requirement
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
<u>Anniston Army Depot</u>			
Average Revenue for Investment	913.2	870.8	769.3
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	0.0
Equipment Modernization	3.2	5.6	0.0
Processes	1.1	2.7	1.6
Capital Investment Program	4.3	8.3	1.6
Operating Funds Investments			
Facilities/Work Environment	0.0	0.0	0.0
Equipment Modernization	6.3	10.7	9.7
Processes	3.2	2.2	2.3
Total Operating Funds	9.5	12.9	12.0
Appropriated Funding			
MILCON	25.0	0.0	0.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	15.1	0.0	0.0
Total Appropriated Funding	40.1	0.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	22.5	22.0
8%- Total Actual/ Budgeted Investment	53.8	43.7	35.6
2%- FSRM Actual/ Budgeted Investment	0.0	22.5	22.0
6% Actual/ Budgeted Investment	53.8	21.1	13.6
8%- Total Required Investment	54.8	69.7	61.5
2%- FSRM Required Investment	0.0	17.4	15.4
6% Required Investment	54.8	52.3	46.2
8%- Total Investment Over/(under) Required Amount	(1.0)	(26.0)	(26.0)
2%- FSRM Investment Over/(under) Required Amount	0.0	5.1	6.6
6%- Investment Over/(under) Required Amount	(1.0)	(31.1)	(32.6)
8%- Total Investment Percentage	5.9%	5.0%	4.6%
2%- FSRM Investment Percentage	0.0%	2.6%	2.9%
6% Investment Percentage	5.9%	2.4%	1.8%
<u>Corpus Christi Army Depot</u>			
Average Revenue for Investment	750.3	729.8	732.9
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	0.0
Equipment Modernization	1.8	41.7	16.9
Processes	1.3	3.1	1.8
Capital Investment Program	3.0	44.8	18.8
Operating Funds Investments			
Facilities/Work Environment	21.3	5.8	19.1
Equipment Modernization	15.1	18.5	20.0
Processes	0.0	0.0	0.0
Total Operating Funds	36.4	24.3	39.1
Appropriated Funding			
MILCON	0.0	115.0	0.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	20.0	0.0	0.0
Total Appropriated Funding	20.0	115.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	23.0	12.4
8%- Total Actual/ Budgeted Investment	59.4	207.1	70.3
2%- FSRM Actual/ Budgeted Investment	0.0	23.0	12.4
6% Actual/ Budgeted Investment	59.4	184.2	57.9
8%- Total Required Investment	45.0	58.4	58.6
2%- FSRM Required Investment	0.0	14.6	14.7
6% Required Investment	45.0	43.8	44.0
8%- Total Investment Over/(under) Required Amount	14.4	148.8	11.6
2%- FSRM Investment Over/(under) Required Amount	0.0	8.4	(2.3)
6%- Investment Over/(under) Required Amount	14.4	140.4	13.9
8%- Total Investment Percentage	7.9%	28.4%	9.6%
2%- FSRM Investment Percentage	0.0%	3.1%	1.7%
6% Investment Percentage	7.9%	25.2%	7.9%

EXHIBIT FUND 6

MINIMUM CAPITAL INVESTMENT REQUIREMENT

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Minimum Capital Investment Requirement
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
<u>Letterkenny Army Depot</u>			
Average Revenue for Investment	474.1	444.7	425.7
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	1.0
Equipment Modernization	6.8	22.5	12.2
Processes	0.6	1.4	0.8
Capital Investment Program	7.4	23.9	14.0
Operating Funds Investments			
Facilities/Work Environment	4.7	1.0	0.0
Equipment Modernization	1.4	2.8	2.2
Processes	0.0	1.4	0.8
Total Operating Funds	6.1	5.2	3.0
Appropriated Funding			
MILCON	21.0	50.4	89.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	18.9	0.0	0.0
Total Appropriated Funding	39.9	50.4	89.0
Facilities Sustainment, Restoration and Modernization	0.0	7.8	5.6
8%- Total Actual/ Budgeted Investment	53.3	87.4	111.5
2%- FSRM Actual/ Budgeted Investment	0.0	7.8	5.6
6% Actual/ Budgeted Investment	53.3	79.5	106.0
8%- Total Required Investment	28.4	35.6	34.1
2%- FSRM Required Investment	0.0	8.9	8.5
6% Required Investment	28.4	26.7	25.5
8%- Total Investment Over/(under) Required Amount	24.9	51.8	77.5
2%- FSRM Investment Over/(under) Required Amount	0.0	(1.1)	(2.9)
6%- Investment Over/(under) Required Amount	24.9	52.8	80.4
8%- Total Investment Percentage	11.2%	19.6%	26.2%
2%- FSRM Investment Percentage	0.0%	1.8%	1.3%
6% Investment Percentage	11.2%	17.9%	24.9%
<u>Red River Army Depot</u>			
Average Revenue for Investment	477.2	433.9	415.9
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	0.0
Equipment Modernization	13.9	2.3	9.7
Processes	0.8	2.0	1.2
Capital Investment Program	14.7	4.3	10.8
Operating Funds Investments			
Facilities/Work Environment	10.5	8.6	0.2
Equipment Modernization	5.2	6.5	10.2
Processes	0.0	0.0	0.0
Total Operating Funds	15.7	15.1	10.3
Appropriated Funding			
MILCON	0.0	0.0	113.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	2.8	0.0	0.0
Total Appropriated Funding	2.8	0.0	113.0
Facilities Sustainment, Restoration and Modernization	0.0	24.5	17.7
8%- Total Actual/ Budgeted Investment	33.2	43.9	151.8
2%- FSRM Actual/ Budgeted Investment	0.0	24.5	17.7
6% Actual/ Budgeted Investment	33.2	19.4	134.1
8%- Total Required Investment	28.6	34.7	33.3
2%- FSRM Required Investment	0.0	8.7	8.3
6% Required Investment	28.6	26.0	25.0
8%- Total Investment Over/(under) Required Amount	4.6	9.1	118.6
2%- FSRM Investment Over/(under) Required Amount	0.0	15.8	9.4
6%- Investment Over/(under) Required Amount	4.6	(6.7)	109.2
8%- Total Investment Percentage	7.0%	10.1%	36.5%
2%- FSRM Investment Percentage	0.0%	5.6%	4.3%
6% Investment Percentage	7.0%	4.5%	32.2%

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Minimum Capital Investment Requirement
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
<u>Tobyhanna Army Depot</u>			
Average Revenue for Investment	592.0	557.3	524.3
WCF Capital Investment Program			
Facilities/Work Environment	0.0	1.8	0.0
Equipment Modernization	6.5	1.9	0.0
Processes	1.0	2.4	1.4
Capital Investment Program	7.5	6.0	1.4
Operating Funds Investments			
Facilities/Work Environment	5.5	11.7	13.8
Equipment Modernization	5.7	5.5	5.7
Processes	3.2	3.1	3.2
Total Operating Funds	14.4	20.3	22.7
Appropriated Funding			
MILCON	0.0	0.0	0.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	19.4	0.0	0.0
Total Appropriated Funding	19.4	0.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	12.2	24.6
8%- Total Actual/ Budgeted Investment	41.3	38.6	48.6
2%- FSRM Actual/ Budgeted Investment	0.0	12.2	24.6
6% Actual/ Budgeted Investment	41.3	26.3	24.1
8%- Total Required Investment	35.5	44.6	41.9
2%- FSRM Required Investment	0.0	11.1	10.5
6% Required Investment	35.5	33.4	31.5
8%- Total Investment Over/(under) Required Amount	5.8	(6.0)	6.7
2%- FSRM Investment Over/(under) Required Amount	0.0	1.1	14.1
6%- Investment Over/(under) Required Amount	5.8	(7.1)	(7.4)
8%- Total Investment Percentage	7.0%	6.9%	9.3%
2%- FSRM Investment Percentage	0.0%	2.2%	4.7%
6% Investment Percentage	7.0%	4.7%	4.6%
<u>Pine Bluff Arsenal</u>			
Average Revenue for Investment	152.4	139.7	138.8
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	0.0
Equipment Modernization	2.2	0.4	5.0
Processes	0.3	0.6	0.4
Capital Investment Program	2.5	1.0	5.4
Operating Funds Investments			
Facilities/Work Environment	0.0	7.0	17.5
Equipment Modernization	0.0	0.6	0.1
Processes	0.0	0.0	0.0
Total Operating Funds	0.0	7.6	17.6
Appropriated Funding			
MILCON	0.0	0.0	0.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	0.0	0.0	0.0
Total Appropriated Funding	0.0	0.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	10.0	7.6
8%- Total Actual/ Budgeted Investment	2.5	18.6	30.5
2%- FSRM Actual/ Budgeted Investment	0.0	10.0	7.6
6% Actual/ Budgeted Investment	2.5	8.6	23.0
8%- Total Required Investment	9.1	11.2	11.1
2%- FSRM Required Investment	0.0	2.8	2.8
6% Required Investment	9.1	8.4	8.3
8%- Total Investment Over/(under) Required Amount	(6.6)	7.4	19.4
2%- FSRM Investment Over/(under) Required Amount	0.0	7.2	4.8
6%- Investment Over/(under) Required Amount	(6.6)	0.2	14.6
8%- Total Investment Percentage	1.6%	13.3%	22.0%
2%- FSRM Investment Percentage	0.0%	7.2%	5.4%
6% Investment Percentage	1.6%	6.1%	16.6%

EXHIBIT FUND 6

MINIMUM CAPITAL INVESTMENT REQUIREMENT

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Minimum Capital Investment Requirement
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
<u>Rock Island Arsenal</u>			
Average Revenue for Investment	163.8	143.8	151.4
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	0.0
Equipment Modernization	7.3	15.8	1.6
Processes	0.1	0.4	0.2
Capital Investment Program	7.4	16.2	1.8
Operating Funds Investments			
Facilities/Work Environment	7.1	7.3	7.5
Equipment Modernization	0.8	1.2	1.2
Processes	0.0	0.0	0.0
Total Operating Funds	8.0	8.4	8.7
Appropriated Funding			
MILCON	0.0	0.0	0.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	0.0	0.0	0.0
Total Appropriated Funding	0.0	0.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	9.5	10.0
8%- Total Actual/ Budgeted Investment	15.4	34.1	20.5
2%- FSRM Actual/ Budgeted Investment	0.0	9.5	10.0
6% Actual/ Budgeted Investment	15.4	24.6	10.5
8%- Total Required Investment	9.8	11.5	12.1
2%- FSRM Required Investment	0.0	2.9	3.0
6% Required Investment	9.8	8.6	9.1
8%- Total Investment Over/(under) Required Amount	5.6	22.6	8.4
2%- FSRM Investment Over/(under) Required Amount	0.0	6.7	7.0
6%- Investment Over/(under) Required Amount	5.6	16.0	1.4
8%- Total Investment Percentage	9.4%	23.7%	13.5%
2%- FSRM Investment Percentage	0.0%	6.6%	6.6%
6% Investment Percentage	9.4%	17.1%	6.9%
<u>Watervliet Arsenal</u>			
Average Revenue for Investment	138.8	167.3	208.5
WCF Capital Investment Program			
Facilities/Work Environment	1.7	1.2	0.0
Equipment Modernization	0.0	0.0	0.0
Processes	0.2	0.5	0.3
Capital Investment Program	1.9	1.7	0.3
Operating Funds Investments			
Facilities/Work Environment	8.2	8.9	9.1
Equipment Modernization	55.8	75.1	71.6
Processes	0.0	0.0	0.0
Total Operating Funds	64.0	84.0	80.7
Appropriated Funding			
MILCON	20.0	0.0	0.0
Procurement	10.7	0.0	0.0
Operations & Maintenance	18.4	0.0	0.0
Total Appropriated Funding	49.0	0.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	15.4	5.3
8%- Total Actual/ Budgeted Investment	114.9	101.0	86.3
2%- FSRM Actual/ Budgeted Investment	0.0	15.4	5.3
6% Actual/ Budgeted Investment	114.9	85.7	81.0
8%- Total Required Investment	8.3	13.4	16.7
2%- FSRM Required Investment	0.0	3.3	4.2
6% Required Investment	8.3	10.0	12.5
8%- Total Investment Over/(under) Required Amount	106.6	87.7	69.6
2%- FSRM Investment Over/(under) Required Amount	0.0	12.0	1.1
6%- Investment Over/(under) Required Amount	106.6	75.7	68.5
8%- Total Investment Percentage	82.8%	60.4%	41.4%
2%- FSRM Investment Percentage	0.0%	9.2%	2.5%
6% Investment Percentage	82.8%	51.2%	38.9%

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Minimum Capital Investment Requirement
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
<u>Tooele Army Depot</u>			
Average Revenue for Investment	63.0	63.5	60.2
WCF Capital Investment Program			
Facilities/Work Environment	0.0	0.0	3.6
Equipment Modernization	0.0	0.0	0.6
Processes	0.1	0.2	0.1
Capital Investment Program	0.1	0.2	4.3
Operating Funds Investments			
Facilities/Work Environment	0.4	0.5	0.5
Equipment Modernization	0.3	0.9	0.9
Processes	0.0	0.0	0.0
Total Operating Funds	0.7	1.4	1.4
Appropriated Funding			
MILCON	0.0	0.0	0.0
Procurement	0.0	0.0	0.0
Operations & Maintenance	16.8	0.0	0.0
Total Appropriated Funding	16.8	0.0	0.0
Facilities Sustainment, Restoration and Modernization	0.0	5.3	5.3
8%- Total Actual/ Budgeted Investment	17.6	6.8	11.0
2%- FSRM Actual/ Budgeted Investment	0.0	5.3	5.3
6% Actual/ Budgeted Investment	17.6	1.6	5.7
8%- Total Required Investment	3.8	5.1	4.8
2%- FSRM Required Investment	0.0	1.3	1.2
6% Required Investment	3.8	3.8	3.6
8%- Total Investment Over/(under) Required Amount	13.8	1.7	6.2
2%- FSRM Investment Over/(under) Required Amount	0.0	4.0	4.1
6%- Investment Over/(under) Required Amount	13.8	(2.2)	2.1
8%- Total Investment Percentage	28.0%	10.7%	18.2%
2%- FSRM Investment Percentage	0.0%	8.3%	8.8%
6% Investment Percentage	28.0%	2.5%	9.4%
<u>Total Army</u>			
Average Revenue for Investment	3,724.8	3,550.8	3,427.0
WCF Capital Investment Program			
Facilities/Work Environment	1.7	2.9	4.6
Equipment Modernization	41.7	90.1	46.0
Processes	5.4	13.3	7.8
Capital Investment Program	48.8	106.4	58.3
Operating Funds Investments			
Facilities/Work Environment	57.7	50.8	67.7
Equipment Modernization	90.7	121.6	121.6
Processes	6.4	6.7	6.2
Total Operating Funds	154.8	179.1	195.5
Appropriated Funding			
MILCON	66.0	165.4	202.0
Procurement	10.7	0.0	0.0
Operations & Maintenance	111.4		
Total Appropriated Funding	188.0	165.4	202.0
Facilities Sustainment, Restoration and Modernization	0.0	130.3	110.4
8%- Total Actual/ Budgeted Investment	391.6	581.2	566.2
2%- FSRM Actual/ Budgeted Investment	0.0	130.3	110.4
6% Actual/ Budgeted Investment	391.6	450.9	455.8
8%- Total Required Investment	223.5	284.1	274.2
2%- FSRM Required Investment	0.0	71.0	68.5
6% Required Investment	223.5	213.0	205.6
8%- Total Investment Over/(under) Required Amount	0.0	130.3	110.4
2%- FSRM Investment Over/(under) Required Amount	(223.5)	(153.8)	(163.8)
6%- Investment Over/(under) Required Amount	391.6	379.9	387.3
8%- Total Investment Percentage	10.5%	16.4%	16.5%
2%- FSRM Investment Percentage	0.0%	3.7%	3.2%
6% Investment Percentage	10.5%	12.7%	13.3%

EXHIBIT FUND 6

MINIMUM CAPITAL INVESTMENT REQUIREMENT

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Source of New Orders and Revenue
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
1. New Orders			
a. Orders from DoD Components:			
Department of Army			
Operations & Maintenance, Army	1,034.3	1,124.1	1,028.0
Operations & Maintenance, ARNG	122.7	154.1	146.3
Operations & Maintenance, AR	24.8	30.2	14.7
Subtotal, O&M:	1,181.9	1,308.4	1,189.0
Aircraft Procurement	49.1	55.4	54.3
Missile Procurement	32.2	25.1	27.1
Weapons & Tracked Combat Vehicles	313.9	235.5	289.9
Procurement of Ammunition	135.9	114.6	106.3
Other Procurement	230.5	304.1	268.0
Subtotal, Procurement:	761.6	734.6	745.6
RDTE	34.7	25.6	48.1
BRAC	0.1		
Family Housing	0.7	0.8	0.8
Military Construction			0.0
Chem Agents & Munitions Dest, Army	15.9	20.4	20.4
Other	0.2	0.0	4.2
Subtotal, Other Army:	51.5	46.8	73.5
Subtotal, Department of Army:	1,995.0	2,089.8	2,008.1
Department of Air Force O&M	57.7	96.2	90.2
Department of Air Force Investment	105.5	85.7	54.2
Department of Navy O&M	30.3	56.1	32.3
Department of Navy Investment	18.6	23.7	22.0
US Marines O&M	25.5	44.4	44.0
US Marines Investment	31.1	15.8	8.1
Other Department of Defense	73.8	68.9	70.1
Subtotal, Other DoD Services:	342.5	390.7	320.9
b. DWCF:			
Industrial Operations, Army	27.1	13.0	12.4
Supply Management, Army	752.2	1,174.2	1,068.0
Supply Management, Air Force	53.6	78.9	63.2
Supply Management, Navy	11.8	21.6	18.5
Supply Management, Marine Corps			0.0
DECA	0.1	0.1	0.1
DFAS	0.4	0.4	0.4
DISA	1.2	0.1	0.1
DLA	12.3	12.2	11.4
TRANSCOM	0.1	1.0	1.2
Other			0.0
Subtotal, DWCF:	858.7	1,301.5	1,175.3
c. Total DoD	3,196.2	3,782.0	3,504.3
d. Other Orders:			
Other Federal Agencies	6.5	3.7	2.5
Foreign Military Sales	115.6	288.5	28.7
Trust Fund			
Nonappropriated	0.9	1.4	1.3
Non-Federal Agencies	105.7	84.4	63.4
Subtotal, Other Orders:	228.8	377.9	95.9
Total New Orders:	3,425.0	4,159.9	3,600.2

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Carryover Calculation Summary
(\$ in Millions)**

A. Carryover Summary	FY 2022	FY 2023	FY 2024
1. Gross Carry-In	4,282.6	3,737.2	3,515.9
Adjustments to Prior Year Orders	(90.6)	(156.9)	(147.6)
Net Carry-In	4,192.0	3,580.3	3,368.3
2. New Orders	3,425.0	4,159.9	3,600.2
3. Total Gross Orders (Lines 1 + 2)	7,617.0	7,740.2	6,968.5
4. Revenue (Gross Sales)	3,879.8	4,224.3	4,186.4
5. Carryover (Line 3 - (Line 4 + Line 5A))	2,377.7	2,255.7	1,820.1
5A. Material End of Period Exclusion	1,359.5	1,260.2	962.0
6. Workload Completed per Month (Line 4 ÷ 12)	323.3	352.0	348.9
7. Months of Carryover (Line 5 ÷ Line 6)	7.4	6.4	5.2
B. Carryover Dollar Value by Appropriation	FY 2022	FY 2023	FY 2024
<i>(Without Prior Year Adjustments for FY 2023 and FY 2024)</i>			
<i>(Does not include adjustments for Inventory EOP)</i>			
<u>Army</u>			
Operation and Maintenance	990.9	797.6	607.5
Procurement	1,081.5	789.1	601.4
Other Army (RDT&E, BRAC, Family Housing, MILCON, etc.)	47.7	55.7	83.5
AWCF (Industrial Operations and Supply Management)	474.1	824.5	818.6
<u>Other Service (O&M, Investment, WCF)</u>			
Air Force	494.0	525.9	458.5
Navy	85.7	121.4	124.6
Marine Corps	98.0	111.0	110.1
Other DOD and Federal Agencies	146.2	79.2	85.2
<u>Foreign Military Sales (FMS)</u>	240.2	310.7	182.2

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Carryover Calculation Summary
(\$ in Millions)**

C. Carryover by Installation	FY 2022		FY 2023		FY 2024	
<u>Depots</u>	<u>Months</u>	<u>Value (\$M)</u>	<u>Months</u>	<u>Value (\$M)</u>	<u>Months</u>	<u>Value (\$M)</u>
Anniston Army Depot	2.8	172.2	3.0	169.7	4.7	292.3
Corpus Christi Army Depot	4.2	248.6	2.7	173.3	4.3	291.8
Letterkenny Army Depot	6.5	221.5	5.7	190.6	4.3	114.4
Red River Army Depot	5.8	249.0	7.9	305.7	2.3	83.0
Tobyhanna Army Depot	7.2	308.3	7.4	322.3	5.3	242.1
Total	5.2	1,199.5	4.9	1,161.6	4.3	1,023.7

	FY 2022		FY 2023		FY 2024	
<u>Arsenals</u>	<u>Months</u>	<u>Value (\$M)</u>	<u>Months</u>	<u>Value (\$M)</u>	<u>Months</u>	<u>Value (\$M)</u>
Pine Bluff Arsenal	21.4	156.2	10.1	131.3	11.7	111.1
Rock Island Arsenal	5.8	56.1	2.2	33.1	1.4	18.6
Watervliet Arsenal	22.0	357.3	15.6	350.5	11.1	230.1
Total	17.2	569.6	10.2	514.9	8.2	359.8

	FY 2022		FY 2023		FY 2024	
<u>Ammo Plants</u>	<u>Months</u>	<u>Value (\$M)</u>	<u>Months</u>	<u>Value (\$M)</u>	<u>Months</u>	<u>Value (\$M)</u>
Blue Grass Army Depot	4.7	51.7	3.8	39.8	3.0	32.6
Crane Army Ammunition Activity	13.7	211.5	15.4	243.3	9.4	161.3
McAlester Army Ammunition Plant	20.3	302.3	15.5	263.0	11.2	201.9
Tooele Army Depot	4.8	22.9	3.4	17.6	0.7	4.8
Sierra Army Depot	1.4	20.2	1.0	15.5	2.6	35.9
Total	10.1	608.5	9.1	579.3	6.6	436.6

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Revenue and Costs
(\$ in Millions)**

	FY 2022	FY 2023	FY 2024
Revenue			
Gross Sales:	3,879.8	4,224.3	4,186.4
Operations	3,721.8	4,082.5	4,049.1
Depreciation excluding Major Construction	158.1	141.8	137.4
Other Income (DWCF Direct Appropriation)	141.9	143.4	27.6
Other Income (Unfunded Depreciation)			
Other Income (Misc Gains/losses)	148.0		
Other Income (Other)	3.4		
Total Income:	4,173.2	4,367.7	4,214.0
Costs			
Salaries and Wages:	2,091.3	1,820.5	1,850.3
Military Personnel Compensation & Benefits	4.0	3.9	4.1
Civilian Personnel Compensation & Benefits	2,087.3	1,816.7	1,846.3
Travel & Transportation of Personnel	30.9	32.6	32.0
Materials & Supplies (For Internal Operations)	1,553.8	1,649.1	1,457.5
Equipment	238.1	147.5	114.2
Other Purchases from Revolving Funds	77.2	68.1	73.5
Transportation of Things	7.6	7.5	7.0
Depreciation	158.1	141.8	137.4
Printing and Reproduction	0.8	1.1	0.9
Advisory and Assistance Services	47.5	70.6	85.5
Rent, Communication, Utilities, & Misc. Charges	94.9	99.1	99.2
Other Purchased Services	484.2	572.4	516.6
Total Costs:	4,784.3	4,610.2	4,374.2
Operating Result	(611.1)	(242.5)	(160.3)
Other Changes Affecting NOR:	623.5	266.1	86.8
Non-Recoverable Expenses (Unfunded Costs)	616.9	266.1	86.8
Non-Recoverable Expenses (Inventory Losses)	13.6		
Non-Recoverable Expenses (FRM)	(7.0)		
Recoverable Net Operating Result	12.4	23.6	(73.4)
Other Changes Affecting AOR			
a. AOR Beginning of Year (Unadjusted)	34.8	49.9	73.4
b. +/- Prior Year Adjustments	2.7		
c. Equals AOR BOY (Adjusted)	37.4	49.9	73.4
d. +/- Net Operating Result	12.4	23.6	(73.4)
e. Deferred AOR			
f. Equals Recoverable AOR EOP	49.9	73.4	(0.0)

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

Fuel Data

FY 2022			
	FUEL PROCUREMENT		
PRODUCT	BARRELS (millions)	COST PER BARREL (\$)	EXTENDED PRICE (\$ millions)
AVGAS (CONUS)		\$141.96	
AVGAS (OCONUS)		\$559.86	
Diesel Fuel:			
Distillates- F76	0.004	\$126.00	0.531
High Sulfur- DF1	0.001	\$125.16	0.143
Generic (High Sulfur)- DF2		\$112.56	
Ultra Low Sulfur- DS1	0.004	\$128.10	0.568
Ultra Low Sulfur- DS2	0.017	\$120.96	2.074
Burner Grade- FS1	0.000	\$122.64	0.036
Burner Grade- FS2		\$108.36	
Biodiesel- BDI		\$121.38	
Jet Fuel:			
JP8 & JA1	0.000	\$125.16	0.028
JAA	0.010	\$124.32	1.287
JP5	0.000	\$126.42	0.005
JPTS		\$194.46	
Kerosene- KS1		\$123.06	
Motor Gasoline:			
Regular, Unleaded- MUR	0.007	\$122.64	0.800
Midgrade, Unleaded- MUM		\$129.36	
Premium, Unleaded- MUP		\$144.06	
Gasohol- GUM	0.000	\$129.36	0.000
Ethanol- E85	0.000	\$122.64	0.046
Residual:			
Burner Grade- FS4	0.000	\$79.38	0.000
Residual (Burner Grade)- FS6		\$63.00	
FOR		\$39.90	
Bunkers Marine- MGO		\$129.36	
Bunkers Intermediate Grade- 180, 380		\$94.50	
Into Plane Jet Fuel- IAI, IAA, IAB, IP8		\$141.96	
Local Purchase Jet Fuel- NA1, NAA		\$153.30	
Local Purchase Ground Fuel- NLS, NMU	0.000	\$131.04	0.000
Propane	0.001	\$125.16	0.091
TOTAL	0.045		5.610

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

Fuel Data

FY 2023			
	FUEL PROCUREMENT		
PRODUCT	BARRELS (millions)	COST PER BARREL (\$)	EXTENDED PRICE (\$ millions)
AVGAS (CONUS)		\$186.06	
AVGAS (OCONUS)		\$732.06	
Diesel Fuel:			
Distillates- F76		\$164.64	
High Sulfur- DF1	0.000	\$163.80	0.051
Generic (High Sulfur)- DF2		\$146.58	
Ultra Low Sulfur- DS1	0.006	\$166.74	0.971
Ultra Low Sulfur- DS2	0.010	\$159.18	1.668
Burner Grade- FS1	0.001	\$160.44	0.186
Burner Grade- FS2	0.001	\$141.54	0.118
Biodiesel- BDI	0.003	\$159.18	0.400
Jet Fuel:			
JP8 & JA1	0.001	\$163.80	0.111
JAA	0.007	\$162.96	1.105
JP5	0.000	\$165.06	0.022
JPTS		\$228.06	
Kerosene- KS1		\$160.86	
Motor Gasoline:			
Regular, Unleaded- MUR	0.004	\$160.44	0.603
Midgrade, Unleaded- MUM		\$169.68	
Premium, Unleaded- MUP		\$188.58	
Gasohol- GUM		\$169.68	
Ethanol- E85	0.001	\$160.44	0.092
Residual:			
Burner Grade- FS4	0.000	\$104.58	0.040
Residual (Burner Grade)- FS6		\$82.74	
FOR		\$39.90	
Bunkers Marine- MGO		\$168.00	
Bunkers Intermediate Grade- 180, 380		\$123.90	
Into Plane Jet Fuel- IAI, IAA, IAB, IP8		\$186.06	
Local Purchase Jet Fuel- NA1, NAA		\$200.76	
Local Purchase Ground Fuel- NLS, NMU		\$171.36	
Propane	0.002	\$160.86	0.276
TOTAL	0.035		5.642

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

Fuel Data

FY 2024			
	FUEL PROCUREMENT		
PRODUCT	BARRELS (millions)	COST PER BARREL (\$)	EXTENDED PRICE (\$ millions)
AVGAS (CONUS)		\$168.00	
AVGAS (OCONUS)		\$660.66	
Diesel Fuel:			
Distillates- F76		\$148.68	
High Sulfur- DF1	0.000	\$147.84	0.0477
Generic (High Sulfur)- DF2		\$132.30	
Ultra Low Sulfur- DS1	0.004	\$150.78	0.5409
Ultra Low Sulfur- DS2	0.005	\$143.22	0.6576
Burner Grade- FS1	0.001	\$144.48	0.1536
Burner Grade- FS2	0.001	\$127.68	0.1097
Biodiesel- BDI	0.002	\$143.22	0.2947
Jet Fuel:			
JP8 & JA1	0.001	\$147.84	0.0741
JAA	0.007	\$147.00	1.1015
JP5	0.000	\$149.10	0.0197
JPTS		\$205.80	
Kerosene- KS1		\$145.32	
Motor Gasoline:			
Regular, Unleaded- MUR	0.014	\$144.48	2.0775
Midgrade, Unleaded- MUM		\$153.30	
Premium, Unleaded- MUP		\$170.52	
Gasohol- GUM		\$153.30	
Ethanol- E85	0.000	\$144.48	0.0676
Residual:			
Burner Grade- FS4	0.000	\$94.50	0.0132
Residual (Burner Grade)- FS6		\$74.76	
FOR		\$39.90	
Bunkers Marine- MGO		\$152.04	
Bunkers Intermediate Grade- 180, 380		\$111.72	
Into Plane Jet Fuel- IAI, IAA, IAB, IP8		\$168.00	
Local Purchase Jet Fuel- NA1, NAA		\$181.02	
Local Purchase Ground Fuel- NLS, NMU		\$154.56	
Propane	0.002	\$160.86	0.3359
TOTAL	0.038		5.494

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

(\$ in Millions)

FY 2022			
	<u>Total</u>	<u>Mobilization</u>	<u>Operating</u>
Material Inventory BOP	987.1		987.1
<u>Purchases</u>			
A. Purchases to Support Customer Orders (+)	1,661.5		1,661.5
B. Purchase of long lead items in advance of customer orders (+)			
C. Total Purchases	1,661.5		1,661.5
<u>Material Inventory Adjustments</u>			
A. Material Used in Maintenance (and billed/charged to customer orders) (-)	871.8		871.8
B. Disposals, theft, losses due to damages (-)	19.0		19.0
C. Other reductions (list) (-)	809.0		809.0
D. Total inventory adjustments	1,699.7		1,699.7
Material Inventory EOP	948.9		948.904
FY 2023			
	<u>Total</u>	<u>Mobilization</u>	<u>Operating</u>
Material Inventory BOP	948.9		948.9
<u>Purchases</u>			
A. Purchases to Support Customer Orders (+)	1,384.4		1,384.4
B. Purchase of long lead items in advance of customer orders (+)			
C. Total Purchases	1,384.4		1,384.4
<u>Material Inventory Adjustments</u>			
A. Material Used in Maintenance (and billed/charged to customer orders) (-)	907.3		907.3
B. Disposals, theft, losses due to damages (-)	327.9		327.9
C. Other reductions (list) (-)	203.0		203.0
D. Total inventory adjustments	1,438.1		1,438.1
Material Inventory EOP	895.1		895.1
FY 2024			
	<u>Total</u>	<u>Mobilization</u>	<u>Operating</u>
Material Inventory BOP	895.1		895.1
<u>Purchases</u>			
A. Purchases to Support Customer Orders (+)	1,205.8		1,205.8
B. Purchase of long lead items in advance of customer orders (+)			
C. Total Purchases	1,205.8		1,205.8
<u>Material Inventory Adjustments</u>			
A. Material Used in Maintenance (and billed/charged to customer orders) (-)	726.4		726.4
B. Disposals, theft, losses due to damages (-)	326.4		326.4
C. Other reductions (list) (-)	193.0		193.0
D. Total inventory adjustments	1,245.8		1,245.8
Material Inventory EOP	855.2		855.2

Capital Budget

Introduction

The primary goal of the Capital Investment Program (CIP) within the AWCF is to establish a capability for reinvestment in the infrastructure of business areas to improve product and service quality and timeliness, reduce costs, and foster state-of-the-art business operations. The CIP provides the framework for planning, coordinating, and controlling AWCF resources and expenditures to obtain capital assets. Included in the capital budget are the following types of assets: automated data processing equipment (ADPE); non-ADPE equipment; automated data processing software, whether internally or externally developed; and minor construction. The capital budget justifies the purchase of assets with a unit cost that is greater than or equal to \$250,000 and have a useful life of two or more years.

Headquarters, Army Materiel Command conducts a thorough vetting process to ensure capital projects deliver a positive return on investment and comply with strategic plans for each industrial facility. Capital projects within the Industrial Operations enterprise focus primarily on replacing and upgrading equipment, while the Supply Management enterprise focuses solely on software development in support of the Logistics Modernization Program.

Capital budget obligation authority is displayed on the following exhibits: Fund 9a, *Capital Investment Summary*; Fund 9b, *Capital Purchase Justification*; and Fund 9c, *Capital Budget Execution*.

The following table shows the Supply Management capital budget and associated cash outlays.

Table CIP 1 - Supply Management Capital Budget

(\$ Millions)	FY 2022	FY 2023	FY 2024
Software	12.6	25.1	22.3
<i>Capital Cash Outlays</i>	<i>14.8</i>	<i>18.4</i>	<i>21.8</i>

The following table shows categories and respective values of the Industrial Operations capital budget and the projected capital cash outlays.

Table CIP 2 - Industrial Operations Capital Budget

(\$ Millions)	FY 2022	FY 2023	FY 2024
Equipment	35.4	99.1	61.4
ADPE & Telecommunications	5.6	10.2	5.0
Software	6.6	16.2	9.4
Minor Construction	3.5	15.1	18.4
Total	51.1	140.6	94.2
<i>Capital Cash Outlays</i>	<i>47.1</i>	<i>67.6</i>	<i>99.5</i>
<i>Note: Numbers may not add due to rounding.</i>			

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Capital Investment Summary
(\$ in Millions)**

Line No.	Item Description	FY 2022		FY 2023		FY 2024	
		QTY	Total Cost	QTY	Total Cost	QTY	Total Cost
00-02	Software Development - Externally Developed	1	12.565	1	25.117	1	22.346
	Logistics Modernization Program	1	12.565	1	25.117	1	22.346
	TOTAL OBLIGATIONS		12.565		25.117		22.346
	<i>Total Capital Outlays</i>		14.837		18.400		21.777
	<i>Total Depreciation Expense</i>		23.959		21.856		15.519

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 00-02 Supply Management Item Description	Software Development - Externally Developed Logistics Modernization Program (LMP)		
	FY 2022	FY 2023	FY 2024
Logistics Modernization Program	12.565	25.117	22.346
Total	12.565	25.117	22.346

Narrative Justification

LMP continues to require enhancement to remain relevant and to maintain superior supply chain functionality, supporting National Level Logistics. LMP Increment 1 was fully fielded in October 2010 and enhanced by LMP Increment 2's full deployment declaration in September 2016. These increments combine to comprise the current LMP capability and is currently used by approximately 21,000 users at more than 50 Army locations worldwide. LMP is an enabler for the Army to achieve its commitment to having fully auditable AWCF financial statements. The LMP continues to seamlessly enable continuous process improvements to achieve compliance and trading partner requirements.

In FY 2023 - FY 2024, LMP will continue to design, develop, test, and deploy improvements to the existing business processes supported by the Army Working Capital Fund (AWCF). These changes are part of the continuous process improvement under capability support based on Army Materiel Command (AMC) priorities. Work will also address continuing auditability requirements and ensuring compliance from a financial accountability perspective. In addition, LMP will be implementing changes to financial data structure per direction from OSD(Comptroller). Implementation of Army Enterprise Resource Planning (ERPs) tools and processes will also be supported which will standardize tools across the Army ERPs enabling improved management of the solution. Integration with the Army Contract Writing System (ACWS) has been put on-hold and will not restart until FY 2024 due to ACWS program changes. The Deputy Secretary of Defense has directed the implementation of Identity, Credential and Access Management (ICAM) in order to meet the audit and zero trust objectives. These tasks also include technical upgrades, minor enhancements, compliance, auditability, and transition of services to new service providers.

The primary benefit of funding this requirement is that auditability requirements will continue to be met; Army approved changes to the LMP solution will be implemented and interface to Army ACWS will be completed.

Failure to fund LMP would prohibit AMC functional requirements from improving operations and place financial compliance at risk. In addition, LMP would not be in compliance with Secretary of Defense directives and would not be able to meet the all Federal, DOD, and Army milestones as developed in the Army Standard Line of Accounting implementation plan.

In FY 2005, a Business Case Analysis was completed for the LMP and an updated Economic Analysis was completed and validated by the Office of the Deputy Assistant Secretary of the Army-Cost and Economics in June 2008. It is available upon request. LMP Increment 2 Economic Analysis is also available upon request.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Supply Management**

**Capital Budget Execution
(\$ in Millions)**

FY	Major Category	Initial Request	Current Projected Cost	Approved Change	Explanation
2022	Software Development				
	<i>Logistics Modernization Program</i>	17.540	12.565	(4.975)	Strategic pause of the ACWS project and Rainer /cFactory test automation software subscription was funded with AWCF Ops instead of AWCF CIP.
	Total FY 2022	17.540	12.565	(4.975)	
2023	Software Development				
	<i>Logistics Modernization Program</i>	17.080	25.117	8.037	Increased Identity, Credential, and Access Management (ICAM) requirement, and increased cost of G-Invoicing enhancement for LMP.
	Total FY 2023	17.080	25.117	8.037	
2024	Software Development				
	<i>Logistics Modernization Program</i>	22.346	22.346	0.000	
	Total FY 2024	22.346	22.346	0.000	

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Summary
(\$ in Millions)**

Line No.	Item Description	FY 2022		FY 2023		FY 2024	
		QTY	Total Cost	QTY	Total Cost	QTY	Total Cost
05-13	NON- ADPE EQUIPMENT CAPABILITIES	19	35.414	27	99.120	15	61.425
	ADPE & Telecommunications Equipment	1	5.589	3	10.216	1	5.045
23-01	- Fiber Installation	0	0.000	1	8.708	0	0.000
19-05	- Voice over Internet Protocol (VOIP)	1	5.589	0	0.000	0	0.000
23-02	- Telephone Switch Upgrade	0	0.000	1	0.358	0	0.000
23-03	- Aruba Wireless Lan	0	0.000	1	1.150	0	0.000
24-01	- Fiber Cable Network Upgrade	0	0.000	0	0.000	1	5.045
	Software Development - Externally Developed	1	6.577	1	16.156	1	9.417
00-02	- Logistics Modernization Program	1	6.577	1	16.156	1	9.417
05-26	MINOR CONSTRUCTION CAPABILITIES	3	3.504	1	15.058	6	18.350
	Total Obligations*	24	51.084	32	140.550	23	94.237
	<i>Total Capital Outlays</i>		47.118		67.602		99.514
	<i>Total Depreciation Expense</i>		64.000		56.859		50.526

*Note: FY 2022 total of \$51.084M does not include the following: FY 2020 Non-ADP Equip. \$0.152M, MC \$0.083M
FY 2021 Non-ADP Equip. \$0.177M, ADPE & Telecom Equip. \$4.379M, SW \$3.074M, MC \$0.827M
FY 2022 SW \$2.901M (LMP to SMA), Non-ADP Equip. \$5.000M; **TOTAL of all items \$16.593M**

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 05-13		Non - ADPE Equipment Capabilities		
Industrial Operations		Non - ADPE Equipment		
Item Description		FY 2022	FY 2023	FY 2024
<i>Non - ADPE Equipment</i>		35.414	99.120	61.425
	Total	35.414	99.120	61.425

Narrative Justification

This exhibit represents equipment purchases costing more than \$250K, which will improve the installations' efficiency or effectiveness through replacement, modification, or addition of production and maintenance capability and compliance with new mission requirements. Equipment supports organic maintenance, overhaul, rebuild, reclamation, conversion, renovation, modification and repair programs.

Acquisition of this equipment will improve productivity and increase capacity; replaces unsafe, inoperable or unusable assets; and includes requirements for environmentally hazardous waste reduction or regulatory agency mandated requirements.

If not acquired, the impact would be reduced mission capability, failures to meet present and future workload requirements, increased man-hour expenditures, inability to meet production schedules, excessive downtime, increased maintenance costs, and decreased accuracy and dependability.

Economic Analyses have been performed on individual projects when required and are available upon request.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 23-01 Industrial Operations	ADPE & Telecommunications Equipment		
	Fiber Installation		
Item description	FY 2022	FY 2023	FY 2024
<i>Fiber Installation</i>	0.000	8.708	0.000
Total	0.000	8.708	0.000

Narrative Justification

The existing fiber optic network has been damaged or degraded over time, resulting in fibers that have been taken out of service. Numerous splices at damage points have created unacceptable signal loss in transmission, further impacting transmission quality. The existing fiber optic main line (trunk) is also not looped, so transmission is completely lost in some areas when damage to the Fiber Optic Cable (FOC) or equipment failures occur. This lack of redundant paths throughout Letterkenny Army Depot (LEAD) creates the situation that any failure in the fiber link causes service interruptions. Since the network also supports reporting capability for security systems in facilities, system outages disrupt access control and intrusion detection capabilities, creating serious security concerns. Further, the current FOC does not have the capacity to conform to the Joint Regional Security Stack (JRSS) configuration.

As data throughput requirements continue to increase, the addition of network capacity and creating of redundant paths are becoming increasingly critical to daily operations throughout LEAD and its tenants. With the installation of a new FOC network, redundant routes will be created ensuring near 100% up time of the FOC. The installation would also ensure LEAD is in compliance with JRSS mandates.

With current and future modern workload, the strain on the current FOC infrastructure and lack of redundant pathways are a recipe for disastrous outages.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 19-05 Industrial Operations	ADPE & Telecommunications Equipment Voice Over Internet Protocol (VOIP)		
	FY 2022	FY 2023	FY 2024
Item description			
<i>Voice Over Internet Protocol (VOIP)</i>	5.589	0.000	0.000
Total	5.589	0.000	0.000

Narrative Justification

To ensure long-term telephone capability, Tobyhanna Army Depot (TYAD) replaced the Nortel SL2200 telephone switch and installed a resilient voice network that ensures integrity and availability of voice capability on the installation. To meet the requirements put forth in Army Regulation 25-13 "Army Telecommunications and Unified Capabilities", TYAD replaced the existing telephone switch with Voice over Internet Protocol (VoIP) capability already available from Defense Information Systems Agency (DISA), Army's current internet service provider. This Private Branch Exchange (PBX) phone system is an analog telephone switch that was installed in the early 1990s. At over 25 years old, this unit was beyond its economic life of 23 years. The existing telephone system requires local dial tone service, long-haul Federal Telecommunications System (FTS) service, and extended switch maintenance, which includes voicemail support and hardware replacement parts support.

The desired outcome is to replace the existing telephone switch with a VoIP system offered as a managed service through DISA as required by Army Regulation 25-13. A total of five (5) existing telecommunications rooms (TR) will receive new telecommunications equipment, cable terminations, and cross-connect cabling, as well as floor-mounted server cabinets. E-911 service, which ties a physical address to VoIP phone numbers, is included.

Without this capital investment, TYAD will have to continue to use the aged analog system and not be able to advance TYAD's voice communication infrastructure to a modern Voice over Internet Protocol digital phone system as required by Army Regulation 25-13.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 23-02		ADPE & Telecommunication Equipment		
Industrial Operations		Telephone Switch Upgrade		
Item Description		FY 2022	FY 2023	FY 2024
Telephone Switch Upgrade		0.000	0.358	0.000
	Total	0.000	0.358	0.000

Narrative Justification

The current Phone system Hardware/Software supports the installation-wide telephone function. Risk Framework Inspections have discovered significant risk in keeping current systems for long-term use. The system is obsolete and near end-of-life for support with any maintenance services.

A new secure phone system will reliably support Pine Bluff Arsenal (PBA) operations and emergency services requirements. In addition, there will be a new maintenance contracts to ensure the system reliability for years to come.

Without this capital investment, PBA risks losing use of its current phone system. Current risk framework shows this a near possibility within the next three years. This would affect operations as well as emergency services.

An economic analysis was reviewed and approved.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 23-03		ADPE & Telecommunication Equipment		
Industrial Operations		Aruba Wireless Lan		
Item Description		FY 2022	FY 2023	FY 2024
Aruba Wireless Lan		0.000	1.150	0.000
	Total	0.000	1.150	0.000

Narrative Justification

The Wireless Local Area Network (WLAN) supports workload at Tobyhanna Army Depot (\$0.800M) and McAlester Army Ammunition Plant (\$0.350M), including mission, production, and other logistic functions. WLAN provides network connectivity where wired network connectivity is problematic or infeasible throughout TYAD and MCAAP. The WLAN enables employees to use mobile information systems for accelerated input to LMP and continuous connectivity to business applications versus waiting until they can access a stationary computer. Without this WLAN investment, the workforce will continue using antiquated (e.g., inefficient, increasingly unreliable, and untimely) processes for data exchanges resulting in negative affects to OIB Modernization efforts and TYAD's and MCAAP's mission.

The WLAN investment will replace some end of life wireless equipment and expand the wireless networks resulting in more reliable and greater increased wireless coverage in remote areas for LMP and connectivity for mission applications. Wireless technology enables greater mobility, provides easier and swifter growth of network reach, scales easier than wired networks, and will support the Internet of Things needed for a modern operational or production working environment.

If not funded, the Army's Organic Industrial Base (OIB) modernization efforts, which requires an ever-increasing dependency on wireless networks to achieve Industrial 4.0, will not be fully realized. The workforce will continue using antiquated processes for data exchanges which will negatively impact productivity, decision making, and competitiveness with some of our more advanced adversaries while slowing OIB Modernization efforts.

Economic Analysis was performed on the project.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 24-01		ADPE & Telecommunication Equipment		
Industrial Operations		Fiber Cable Network Upgrade		
Item Description		FY 2022	FY 2023	FY 2024
<i>Fiber Cable Network Upgrade</i>		0.000	0.000	5.045
	Total	0.000	0.000	5.045

Narrative Justification

Current capability supporting Pine Bluff Arsenal's (PBA) network needs is a Multi-mode fiber which is limited to 1GB speed over a 2K distance. This configuration cannot meet Army's 10GB connection requirement. It is obsolete by modern network standards, with all new equipment being developed for Single-Mode fiber.

This network upgrade will able to support more functions and operate faster for employees.

Without this network upgrade, it would require PBA to utilize a 25+ years old network that no longer has development to support its limited capability.

An economic analysis was reviewed and approved.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 00-02 Industrial Operations	Software Development - Externally Developed Logistics Modernization Program (LMP)		
	FY 2022	FY 2023	FY 2024
Item Description			
<i>Logistics Modernization Program</i>	6.577	16.156	9.417
Total	6.577	16.156	9.417

Narrative Justification

LMP continues to require enhancement to remain relevant and to maintain superior supply chain functionality, supporting National Level Logistics. LMP Increment 1 was fully fielded in October 2010 and enhanced by LMP Increment 2's full deployment declaration in September 2016. These increments combine to comprise the current LMP capability and is currently used by approximately 21,000 users at more than 50 Army locations worldwide. LMP is an enabler for the Army to achieve its commitment to having fully auditable AWCf financial statements. LMP continues to seamlessly enable continuous process improvements to achieve compliance and trading partner requirements.

In FY 2023 - FY 2024, LMP will continue to design, develop, test, and deploy improvements to the existing business processes supported by the Army Working Capital Fund (AWCF). These changes are part of the continuous process improvement under capability support based on Army Materiel Command (AMC) priorities. Work will also address continuing auditability requirements and ensure compliance from a financial accountability perspective. LMP will be implementing changes to financial data structure per direction from OSD(Comptroller). Implementation of Army Enterprise Resource Planning (ERPs) tools and processes will be supported which will standardize tools across the Army ERPs enabling improved management of the solution. Integration with the Army Contract Writing System (ACWS) has been put on-hold and will not restart until FY 2024 due to ACWS program changes. The Deputy Secretary of Defense has directed the implementation of Identity, Credential and Access Management (ICAM) in order to meet the audit and zero trust objectives. These tasks also include technical upgrades, minor enhancements, compliance, auditability, and transition of services to new service providers.

The primary benefit of funding this requirement is that auditability requirements will continue to be met; Army approved changes to the LMP solution will be implemented and interface to Army ACWS will be completed.

Failure to fund LMP would prohibit Army functional requirements from improving operations and place financial compliance at risk. In addition, LMP would not be in compliance with Secretary of Defense directives and would not be able to meet the all Federal, DOD, and Army milestones as developed in the Army Standard Line of Accounting implementation plan.

In FY 2005, a Business Case Analysis was completed for the LMP and an updated Economic Analysis was completed and validated by the Office of the Deputy Assistant Secretary of the Army-Cost and Economics in June 2008. It is available upon request. LMP Increment 2 Economic Analysis is also available upon request.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Purchase Justification
(\$ in Millions)**

Line No. 05-26 Industrial Operations Item Description	Minor Construction Capabilities Various Minor Construction <\$4 Million		
	FY 2022	FY 2023	FY 2024
<i>Various Minor Construction Capabilities</i>	3.504	15.058	18.350
Total	3.504	15.058	18.350

Narrative Justification

Various minor construction projects costing less than \$4 million will improve the efficiency of the Industrial Operations through new, modernized additions to renovate existing facilities. The construction projects are additions or modifications to meet mission needs and improve the quality of life (safety/environmental concerns).

The projects will increase productivity and allow for quality of life improvements. Specifically, the efficiency of the mission work will improve with better plant layout, better electrical distribution, and improved lighting, heating, ventilation and, air conditioning. The projects specific to quality of life improvements will improve worker morale and eliminate potential health and safety concerns.

If not approved, facility conditions will continue to decline, worker morale will diminish, the work environment will erode, and worker safety and health will continue to be a significant concern.

Economic Analyses have been performed on individual projects when required and are available upon request.

**Army Working Capital Fund
Fiscal Year (FY) 2024 Budget Estimates
Industrial Operations**

**Capital Budget Execution
(\$ in Millions)**

FY	Major Category	Initial Request	Current Projected Cost	Approved Change	Explanation
2022	Non-ADPE	18.158	35.414	17.256	Army execution 14 additional projects in FY22.
	ADPE and Telcom	5.589	5.589	0.000	
	Software	5.328	6.577	1.249	Increased Identity, Credential, and Access Management (ICAM) requirement, and increased cost of G-Invoicing enhancement for LMP.
	Minor Construction	5.962	3.504	(2.458)	Two projects delayed to FY23.
	Total FY 2022	35.037	51.084	16.047	
2023	Non-ADPE	92.931	99.120	6.189	Army increased the number of projects in addition to increasing cost of the projects.
	ADPE and Telcom	8.708	10.216	1.508	Emerging Pine Bluff Arsenal Telephone Switch Upgrade and Aruba Wireless LAN
	Software Development	6.644	16.156	9.512	Emerging G-Invoicing and Extended Data Warehouse LMP requirements.
	Minor Construction	18.121	15.058	(3.063)	Two projects delayed to FY24.
	Total FY 2023	126.404	140.550	14.146	
2024	Non-ADPE	61.425	61.425	0.000	
	ADPE and Telcom	5.045	5.045	0.000	
	Software Development	9.417	9.417	0.000	
	Minor Construction	18.350	18.350	0.000	
	Total FY 2024	94.237	94.237	0.000	

The Army Values

