

**NATIONAL GUARD AND RESERVE EQUIPMENT  
REPORT FOR FISCAL YEAR 2009**

**(NGRER FY 2009)**

**(In Accordance with Title 10, United States Code, Section 10541)**

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**Prepared by  
Department of Defense  
Office of the Assistant Secretary of Defense for Reserve Affairs  
Deputy Assistant Secretary of Defense  
(Materiel and Facilities)**

**COL Stuart Taylor, Editor  
Washington, DC 20301-1500**





RESERVE AFFAIRS

**ASSISTANT SECRETARY OF DEFENSE  
1500 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1500**

## FOREWORD

In the seven years since September 11, 2001, our Reserve components (RC) have performed missions ranging from high intensity combat operations; to humanitarian assistance; to rescuing victims from a host of weather related events, and supporting the border security mission in the United States. Our most pressing challenge is to sustain our military forces for current operations while meeting our other worldwide commitments whatever and wherever they might be.

The purpose of our RC is to provide operational capabilities and strategic depth to meet U.S. defense requirements in war and peace. This is consistent with the most recent Quadrennial Defense Review report which stated, "To fight the long war and conduct other future contingency operations, joint force commanders need to have more immediate access to the Total Force. In particular, the RC must be operationalized, so that select Reservists and units are more accessible and more readily deployable than today."

Now, because of operational requirements coupled with the cost and time required to ship major end items, many pieces of equipment remain in theater for follow-on forces. Meanwhile, other equipment that returned to the United States is currently undergoing reset at depot repair facilities. These practices have affected the equipment on-hand (EOH) levels of RC units. The net result is that many RC units currently have a lower EOH level than the historic average of 75 percent. This situation has raised concerns about the RC ability to respond to crises such as natural disasters or homeland defense emergencies.

It is reasonable to assume that significant resource emphasis will be needed to source our homeland defense capability in the coming years. It is also reasonable to assume that our budgets will continue to be under fiscal constraint. Therefore, the design of the RC equipping strategy is envisioned to procure and distribute equipment to maintain a degree of readiness that is responsive to the Combatant Commanders' requests while sustaining capabilities to respond when called upon here at home. The equipping strategy takes into account the Department's support to State Homeland Defense missions, while maximizing equipment availability throughout the force. The Department's goal is to analyze what and where the greatest needs lie and design a strategy that best fits the management of today's RC as both an operational force and strategic force. We are better served by articulating an EOH goal that recognizes both equipment mission sets and is supported by our program planning. The administration is continuing a process of doing just that.

Whether fighting our Nation's wars, protecting infrastructure, patrolling borders, or rescuing victims during natural disasters, our RC Soldiers, Sailors, Airmen, Marines, and Coast Guardsmen continue to serve with distinction across the globe. This report lays out our plan to ensure the RC are fully equipped to continue supporting the Nation as a mission-ready, critical element of our National Security Strategy.

Sincerely,

A handwritten signature in black ink that reads "T. F. Hall". The signature is written in a cursive style with a large, stylized "H".

T. F. Hall



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# Chapter 1 Overview

## I. Strategic Context

As our Reserve components (RC) are managed more as an operational force, it has been necessary for the Assistant Secretary of Defense for Reserve Affairs to develop a Reserve component equipping strategy to ensure RC units are equipped to support the National Military Strategy (NMS) and Homeland Defense (HLD).

The Equipping Strategy must take into account that force structure and mission changes have generated additional requirements in equipping each military service. Modernizations, equipment replacement due to the war, as well as the HLD mission are the catalyst for a new approach in equipping the RCs.

### A. Equipping Strategy

The RCs of each Military Department need to be properly equipped not only when deploying but in order to stay trained. The design of the RC equipping strategy is envisioned to procure and distribute equipment to maintain a degree of readiness that is responsive to the Combatant Commanders' request while sustaining capabilities to respond when called upon here at home. The strategy also must take into account the Department's support to State HLD missions, while maximizing equipment availability throughout the force.

The Department's goal is to analyze what and where the greatest needs lie and design a strategy that best fits today's management of the RC as both an operational force and strategic force. Major changes in current thinking and new concepts of how to equip the RC force that focuses on availability, access, and transparency in distribution of equipment and resources are paramount. The Departments ultimate goal is to fully equip units using a transitional approach designed to provide an equipped, trained, and ready force at various stages of the new rotation policy while factoring in our HLD mission. These efforts are on-going and may necessitate some level of demonstration and proof of concept prior to recommending to the Secretary of Defense full implementation throughout the Department.

Since Hurricane Katrina, there has been particular attention paid to the equipment status of the National Guard. To better understand the current equipment status, it is instructive to review the equipping strategy in the strategic reserve era.

For the past thirty years, the concept was to resource equipment for 100 percent of unit requirements. However, fiscal budget realities prevented the realization of this, both within and across the RCs. For instance, in the years prior to the GWOT, the Army National Guard's overall equipment on-hand (EOH) percentage was consistently in the neighborhood of 75 percent, the composition of which included both new and cascaded equipment.

Now, because of operational requirements coupled with the cost and time required to ship major end items, many pieces of equipment remain in theater for use by follow-on forces. Meanwhile, other equipment, upon returning to the United States, undergoes reset at depot facilities. These practices affect unit EOH ratings. The net result is that many RC units have a lower EOH rating

than the historic average of 75 percent. Currently, the Army National Guard's EOH level is approximately 55 percent overall. This situation has raised some concern about the National Guard's ability to respond to natural disasters or homeland defense emergencies.

The Department of Homeland Security (DHS) and the Department of Defense (DoD) are determining and developing the specific capabilities necessary to meet our homeland security (HLS) needs. Once the needed HLS capabilities are determined, an equipment requirement will be developed, and sourcing will be programmed. HLS involves numerous Federal agencies and the military. The National Guard is one slice—but an extremely important slice—of the HLS picture.

It is reasonable to assume that significant resource emphasis will be needed to source our HLD capability in the coming years. It is also reasonable to assume that our budgets will continue to be under fiscal constraint. Therefore, an interim equipping strategy is needed that provides a level deemed sufficient for balancing near-term wartime requirements and enduring HLD requirements. The DoD is better served by articulating, and thereby planning for an EOH goal that recognizes both mission sets and is programmable. The administration is in the process of doing just that.

Having recognized that the Guard is a key operational force and important player in HLD, the administration significantly increased Guard procurement budgets in the FY 2007 Supplemental budget request, in the FY 2008 President's Budget, and in the Department's program for FY 2009-2013. Over these five years, the Army is projected to fund the Army National Guard to reach 77 percent EOH based on the dollar value of projected equipment on-hand versus requirement (note: if item counts rather than dollar weighting were used, the projected EOH would be 88 percent) . This provides the Guard with increased capabilities to train and deploy ready forces for whatever missions the country requires.

For FY 2008, the Reserve components received appropriations of about \$6.3B for equipment procurement with an additional \$6.9B requested in the 2008 GWOT Supplemental. Also, Congress through National Guard and Reserve Appropriations (NGREA) provided \$974 million to the Reserve components for equipment procurement. In the FY 2009 President's Budget, the request for Reserve components is \$9B for equipment.

## **B. Managing the RC as an Operational Force**

Most agree that our RCs have in fact already become “operational”. The origins of this can be traced back to the ever-increasing reliance on the RC in the military operations of the 1990s. This reliance reached its peak as the Global War on Terrorism (GWOT) has matured. In April of 2003, for instance, 210,000 RC members were mobilized. Currently, the RCs are supporting operations around the globe, with approximately 90,000 personnel mobilized and thousands more serving individually.

This level of RC utilization represents a dramatic shift. It represents a new paradigm for reserve service. Thus, our challenge is to set the conditions necessary to manage the RC as an operational force, and within a broader strategic framework to ensure that our Nation always has a fully capable National Guard and Reserve.

Managing the RC as an operational force requires operating across the continuum of military missions performing both strategic and operational roles in peacetime, wartime, contingency, domestic emergencies and HLD operations. To accomplish this, each Service must organize resource, equip, train, and utilize RC to support mission requirements to the same standards as its Active component (AC). Each Service's force generation plan prepares both units and individuals to participate in missions, across the full spectrum of military operations, in a cyclic or periodic manner that provides predictability for the combatant commands, the Services, service members, their families, and civilian employers.

This management of the RC as an operational force is ambitious and quite encompassing, but it is necessary for the RC to fulfill its role in our NMS.

### **C. Recognizing Success**

While the exact structure or the specific missions of the RC will evolve, as the NMS requires, there are attributes that will be fundamental to meeting our challenge successfully.

First, a new alignment among stakeholders must emerge. The Services must recognize that managing the Guard and Reserve as an operational force brings new levels of effectiveness and efficiencies not only to the RC but also to the military as a whole.

Second, increased integration must occur between the AC and the RC. This integration extends across Services, and manifests itself increasingly in joint operations. It recognizes that AC and RC integration is a force multiplier, bringing a more potent response to all missions. At the same time fundamental differences between a full-time and a part-time force must be appreciated and managed to ensure that each element of the force can contribute effectively.

Third, the National Guard and Reserve must be properly resourced to accomplish their missions. Much has been done to update resourcing strategies in the Services. The Army, for example, has changed from its "tiered readiness" resourcing models of the 1990s and is developing new approaches to provide training opportunities and equipment to units in support of a "train-mobilize-deploy" strategy.

Fourth, there will be a greater flexibility in service commitments for personnel to participate in the Guard and Reserve. It will also help us strike a balance that will meet the needs of commanders, service members, families and civilian employers of reservists—a partnership that is sensitive to the demands of all and still allows the most talented and capable individuals in American society to serve in the National Guard or Reserve.

In order to manage the RC as an operational force, and to ensure that it thrives far into the future, there are some specific areas to focus on.

### **D. Utilization in this Operational Era**

In January 2007, the Secretary of Defense Robert Gates issued his memorandum: "*Utilization of the Total Force.*" This document outlined a new policy with respect to deployment of the AC and RC forces. This policy establishes a new planning objective: no more than one year mobilized and five years demobilized as the goal for RC units and service members. To meet the

current GWOT force requirements, it has in many cases been difficult to achieve the one-in-six goal. However, there are several factors that are getting us closer to realizing the goal.

Early in 2007, plans were announced to increase the end strength of the Marine Corps, Army AC, Army National Guard (ARNG), and Army Reserve (USAR). The increase of 92,000 service members will help to increase dwell times by adding additional manpower to rotation cycles.

The efforts to rebalance the force have also been increased. Rebalancing involves reducing low-demand structure while increasing structure in high demand capability areas. For the past five years, DoD has rebalanced approximately 100,000 spaces, both within and between the AC and RC. This process is scheduled to proceed through FY 2012, resulting in more than 205,000 spaces rebalanced. This program aligns the forces to better meet our national security needs in the current and future operational environments, while further reducing stress on the force.

Another feature of the new utilization policy is the 12-month limit on the duration of RC mobilizations. This limit is intended to provide predictability and reduce stress on the Reserve Force by reducing the amount of time that a reservist is away from his or her family and civilian job. This predictability will help our service members better manage both employer and family requirements, which ultimately will aid retention and reduce attrition.

The DoD is also working towards expanding options for volunteerism within the RC. For example, DoD is working with the Services on the formation of prototype units composed of individuals available for duty exceeding 39 days but less than 365 days per year. The need exists because some operations surge on a cyclical basis while others surge based on contingencies. Staffing certain types of units with personnel possessing both the desire and the flexibility to serve longer periods will allow us to better integrate the RC into current operations. The lessons learned from these units will shape policy and legislative initiatives in this area.

Reserve Affairs is also coordinating within OSD, the Joint Staff, the Combatant Commands, and the Services to identify opportunities for the RC to assume planned contingency missions both overseas and in CONUS. Examples include the Partnership for Peace initiatives and the Theater Security Cooperation Program.

DoD is also actively working to expand opportunities for RC participation in joint, coalition, and interagency training. By continuing to closely monitor existing Service exercise and events, such as Red Flag and Bright Star, for RC participation and integration, DoD anticipates more joint opportunities for RC service members.

## **II. Scope of the Report**

The NGRER, mandated in Title 10, United States Code, Section 10541, is a statutory requirement that signals Congressional interest in ensuring a well equipped and robust RC capability within the armed forces. The NGRER identifies major items of equipment in the RC inventories that are important to the Services, DoD, and Congress, and also outlines how that equipment is being acquired and disposed of by the Reserves for the budget year and the two succeeding years of the FY 2009 Future Years Defense Plan (FYDP). Data on equipment included in the report consist of high-value, mission essential equipment requirements, critical

equipment shortages, Service procurements, and supplemental funding for the RC, and items procured with National Guard and Reserve Equipment Appropriation (NGREA) funding.

The three charts that follow in this chapter present a broad overview of: previous major items reported in the NGRER, major item shortages in terms of dollar amounts, and the recent trace through the current budget year of procurement funding for each of the RCs. It should be noted that these introductory charts are summary and historical in nature and do not indicate the comprehensive dollar requirement that would be needed to fully fund Reserve capabilities. Other potential costs, such as modernization of existing systems, would not be reflected here. That detail, where appropriate, is contained in the respective chapters of the individual RCs.

This report presents the results of analyses of RC inventories based primarily on the dollar value of the equipment, which allows the aggregation, comparison, and summary of diverse types of equipment. The total requirement and inventory for each major equipment type is weighted by the equipment's procurement cost. The procurement costs, from the Services' official data, are either the latest procurement cost adjusted for inflation or the current replacement cost.

Chart 1-1 shows the number of types of equipment included in previous NGRER reports to Congress. These numbers are provided for perspective and comparison with previous reports and do not represent the entire inventory of RC major items. RC inventories include thousands of different types of equipment. The FY 2009 NGRER highlights 941 major equipment types whose total dollar value comprises approximately 85 percent of the value of all RC equipment.

The Sections 351(a), 351(c)(1), and 1826 of the FY 2008 National Defense Authorization Act (NDAA) directed new equipment reporting requirements for the RCs. This guidance is highlighted in its entirety in Appendix A and the Services first effort to report the required information is located in Appendix B. More clarity will be developed in next years report as the programs mature over the year.

*Chart 1-1 Items of Equipment Reported in Recent NGRERs*

<b>Reserve Component</b>	<b>FY 2004 NGRER</b>	<b>FY 2005 NGRER</b>	<b>FY 2006 NGRER</b>	<b>FY 2007 NGRER</b>	<b>FY 2008 NGRER</b>	<b>FY 2009 NGRER</b>
ARNG	121	130	129	129	231	421
AR	239	270	249	249	233	222
USMCR	156	152	151	157	161	200
USNR	35	35	36	36	33	33
ANG	31	30	27	33	31	33
AFR	27	28	19	19	16	17
USCGR	22	22	16	15	15	15
<b>Total</b>	<b>631</b>	<b>667</b>	<b>627</b>	<b>638</b>	<b>720</b>	<b>941</b>

### **III. Equipment Shortages**

The aggregate equipment shortage for all the RC is approximately \$60.8B. Chart 1-2 shows the dollar value of the current total major equipment requirements and inventories for each RC. This

chart captures the requirement for new procurement for the RC; however, it does not indicate capabilities, shortfalls, or parity mismatch with the AC due to modernization requirements. For example, it does not include substitute items of equipment in determining shortages of Army RC equipment. Also, the Air National Guard reflects a 0.5 percent shortage of its major items; however about \$6B of the Air National Guard’s equipment is not modernized to the level of its AC counterpart. These conditions are explained in more detail in each Service’s respective chapter.

*Chart 1-2 Beginning FY 2008 Reserve Component Equipment Shortages*

<b>Reserve Component</b>	<b>Requirements (\$)</b>	<b>On-Hand (\$)</b>	<b>Shortage (\$)</b>	<b>Shortage (% of Req'd \$s)</b>
ARNG	\$104,198,000,000	\$56,657,000,000	\$47,541,000,000	45.6%
AR	21,778,000,000	10,278,000,000	11,500,000,000	52.8%
USMCR	5,224,243,552	5,174,381,552	49,862,000	1.0%
USNR	9,398,322,000	8,905,996,000	492,326,000	5.2%
ANG	35,180,409,980	34,989,409,980	191,000,000	0.5%
AFR	23,566,500,000	22,587,500,000	979,000,000	4.2%
USCGR	31,809,000	30,470,000	1,339,000	4.2%
<b>Total</b>	<b>\$199,377,284,532</b>	<b>\$138,622,757,532</b>	<b>\$60,754,527,000</b>	<b>30.5%</b>

Note: Requirements, on-hand, and shortage entries are total equipment value, excluding substitutes.

The Service plans for new equipment procurement, both AC and RC, are provided in their respective FYDPs. Each year, the President’s Budget submission provides the RC equipment procurement details in the P-1R. *Table 3*, which appears after each RC narrative section in this report, depicts the requested RC equipment procurements for FY 2009 through FY 2011.

#### **IV. Equipment Procurements**

Chart 1-3 shows funding levels from three RC procurement sources for FY 2003 through FY 2009. The FY 2009 funding does not include any NGREA or Congressional additions, since those funding amounts are not established until after the publication of the FY 2009 NGRER.

Chart 1-3 Reserve Component Procurement Funding

FY	Procurement Funding Source	RC Procurement Funding (\$ in Millions)							Total	Grand Total
		ARNG	AR	USMCR	USNR	ANG	AFR			
2003	President's Budget P-1R Submit	1,046.3	568.0	253.7	39.5	341.7	118.6	2,367.8		
	Congressional Adds to AC Accts for RC	193.7	65.4	0.0	86.3	217.4	2.5	565.3		
	NGREA	29.4	9.8	9.8	9.8	29.4	9.8	98.0		
	<b>Total</b>	<b>1,269.4</b>	<b>643.2</b>	<b>263.5</b>	<b>135.6</b>	<b>588.5</b>	<b>130.9</b>			<b>\$3,031.1</b>
2004	President's Budget P-1R Submit	501.2	244.3	66.8	129.7	453.5	169.8	1,565.3		
	Congressional Adds to AC Accts for RC	290.8	6.7	0.0	63.4	45.4	0.0	406.3		
	NGREA	99.3	44.7	44.7	44.7	119.1	44.7	397.0		
	<b>Total</b>	<b>891.3</b>	<b>295.7</b>	<b>111.5</b>	<b>237.8</b>	<b>618.0</b>	<b>214.5</b>			<b>\$2,368.6</b>
2005	President's Budget P-1R Submit	586.8	302.5	55.6	127.3	425.8	134.7	1,632.7		
	Congressional Adds to AC Accts for RC	194.1	126.2	0.0	60.1	86.4	11.0	477.8		
	Supplemental	787.0	0.0	0.0	0.0	38.4	0.0	825.4		
	NGREA	110.6	51.8	49.8	43.8	98.6	43.8	398.4		
<b>Total</b>	<b>1,678.4</b>	<b>480.5</b>	<b>105.4</b>	<b>231.2</b>	<b>649.2</b>	<b>189.5</b>		<b>\$3,334.3</b>		
2006	President's Budget P-1R Submit	1,144.7	37.7	252.0	101.5	427.7	164.5	2,128.1		
	Congressional Adds to AC Accts for RC	59.3	97.5	0.0	1.5	257.8	26.1	442.1		
	Supplemental	2,143.4	756.0	0.0	0.0	10.0		2,909.4		
	NGREA	770.9	129.6	29.6	29.6	229.6	29.6	1,218.9		
<b>Total</b>	<b>4,118.3</b>	<b>1,020.8</b>	<b>281.6</b>	<b>132.6</b>	<b>925.0</b>	<b>220.2</b>		<b>\$6,698.4</b>		
2007	President's Budget P-1R Submit	2,115.6	391.6	120.4	60.0	628.9	234.1	3,550.6		
	Congressional Adds to AC Accts for RC	2,414.9	1,251.3	0.0	1.0	228.6	2.0	3,897.8		
	Supplemental	2,397.1	1,232.1	0.0	0.0	0.0	0.0	3,629.2		
	NGREA	74.7	89.9	34.9	34.9	74.7	34.9	343.8		
<b>Total</b>	<b>7,002.3</b>	<b>2,964.9</b>	<b>155.3</b>	<b>95.9</b>	<b>932.2</b>	<b>271.0</b>		<b>\$11,421.4</b>		
2008	President's Budget P-1R Submit	3,496.2	690.3	99.9	51.7	633.9	316.7	5,288.7		
	Congressional Adds to AC Accts for RC	45.2	0.0	0.0	10.0	17.9	0.0	73.1		
	NGREA	645.6	44.7	44.7	44.7	149.0	44.7	973.4		
	<b>Total</b>	<b>4,187.0</b>	<b>735.0</b>	<b>144.6</b>	<b>106.4</b>	<b>800.8</b>	<b>361.4</b>			<b>\$6,335.2</b>
2009	President's Budget P-1R Submit	5,443.4	1,235.2	109.5	201.9	1,214.2	445.0	8,649.2		
	Congressional Adds to AC Accts for RC									
	NGREA									
<b>Total</b>								<b>\$8,649.2</b>		

Note 1: USNR figures include USMCR aircraft procurement funds.  
 Note 2: The above figures do not include Ammunition procured for the RC.  
 Note 3: 2005 & 2006 NGREA includes both Title III & IX funding.  
 Note 4: 2006 Congressional Adds for ANG include plus up for 2 C-130J aircraft scheduled for delivery to ANG.  
 Note 5: 2006 Supplemental includes equipment in Title IX of PL109-148 that Services identified to go to RC.  
 Note 6: 2009 Congressional Adds and NGREA values will not be available until after publication.

Recent Service procurements have not always been sufficient to meet growing requirements to replace and modernize the RC equipment inventories; therefore Congress provides additional funds for the RC in the form of NGREA. These funds which vary from year-to-year have helped significantly to alleviate shortfalls in RC equipment procurement. NGREA projections beyond FY 2008 are not provided because the Services do not budget for these funds.

### V. The Reserve Components' Equipping Concerns

This segment briefly summarizes the principal equipping concerns of each RC. The components' individual chapters treat these subjects in more detail.

## **A. The Army National Guard (ARNG)**

The Army's resources have been stretched thin by six years of war and the challenge of transforming into a campaign-quality, expeditionary force capable of supporting combatant commanders, Joint and combined warfighting capabilities across a spectrum of conflicts.

The current demand for our forces exceeds their ability to sustain an adequate supply of forces. The Army is consumed with meeting the demands of the current fight but unable to provide ready forces as rapidly as necessary for other contingencies. As a result, the Army RCs are performing an operational role for which they were not originally designed. This means that improving the current force by equipping Soldiers, resetting returning units, preparing deploying units, and reconstructing into modular units to support operational requirements is critical.

Equipping shortfalls are presenting challenges to the ARNG. Being fully equipped is critical to maintaining a trained force, providing combat power, and quickly responding to domestic missions. When applying the Army's readiness reporting regulation, the ARNG's current EOH for non-deployed units is 65 percent or less due to deployments, equipment diversions in theater, and transformation of the force. This posture will improve due to scheduled new equipment deliveries and the Army's funding plan. The end result is all Army units (including the RC) will have modern equipment at the same required levels so that modularity and interoperability are achieved across the force.

The majority of ARNG equipment has been received as a result of "cascading" from the AC. Consequently that equipment is near the end of its projected service life. The Department of the Army estimates that approximately \$2B per year is required just to replace obsolete equipment with no improvement in readiness. As the ARNG continues to support GWOT deployments, issues of incompatibility, interoperability, and capability continue to arise as ARNG units work with the AC's modern equipment. Examples include using VRC-12 radios as substitutes for SINCGARS, and M16A1 rifles as substitutes for M249 Squad Automatic Weapons.

Congress and the Army have increased equipment procurement through the FY 2005–2013 Program Objective Memorandum (POM). However, by FY 2013, when all programmed equipment is delivered, the ARNG will have only 77 percent of its requirement and an unfunded equipment requirement of \$23.6B (note: percentage is based on the dollar value of the projected on-hand equipment versus the requirement). An additional programming of \$6B from FY 2014 to FY 2019 is needed to resource the ARNG to 100 percent of equipment requirements. This includes filling shortages, modernizing equipment, and replacing broken equipment.

## **B. The United States Army Reserve (USAR)**

As a result of managing the Army Reserve (AR) as an operational force, the demand on its equipment has risen significantly over the past six years. In FY 2007, the AR reported having only 66 percent of its required MTOE equipment. As the USAR makes up 26 percent of the Army's combat service and combat service support units, not having the appropriate quantities of the most modern equipment makes the USAR equipment obsolete and incompatible with today's modern Army. Shortages of modern equipment combined with the large amount of obsolete equipment substitution degrade the USAR's ability to train in support of the modular Army and

meet the requirements of the ARFORGEN model (explained in detail in Chapter 2). This has become even more important in deployment readiness and pre-mobilization.

The age of AR equipment also continues to plague the readiness of the equipment as it has neared or passed its economic useful life. Several examples of this are the light and light medium tactical truck fleets, materiel handling equipment, and engineer equipment. Aging equipment causes operational and sustainment costs to increase while equipment serviceability rates decrease. The GWOT is a significant contributor to shortening the economic useful life of AR equipment.

The USAR requires approximately \$1.6B per year through the POM to achieve its equipping and modernization goals. Without the right equipment levels, the Soldiers' ability to safely accomplish their mission is in jeopardy.

### **C. The United States Marine Corps Reserve (USMCR)**

The Marine Corps continues full implementation of AC and RC interoperability and compatibility by pursuing a policy of integrated training and horizontal fielding of new equipment. To meet the challenges of today and tomorrow's complex spectrum of conflicts and crisis, the Marine Corps is organized into scaleable combined arms teams. Each team is designed to seamlessly integrate ground and aviation forces to create the speed, flexibility, and agility needed to respond to any emerging situation.

Overall USMCR equipment compatibility with AC equipment is satisfactory, but some equipment incompatibility exists. Reasons include aging equipment, attrition through wear and damage, and destruction in Iraq and Afghanistan. Also, USMCR units do not possess adequate quantities of the most current digital communications equipment that is primarily used for intra-squad or small-unit, tactical-level communications. Fielding of this equipment is scheduled to begin in FY 2008 and will end when digital communication equipment deficiencies are eliminated.

The top USMCR equipping challenges are: outfitting deploying Marines with the most recently fielded individual combat clothing and equipment, providing Marine Corps Reserve units with the "right amount" of equipment to effectively train in a pre-activation environment; and achieving modernization initiatives with limited resourcing.

Assisting both the AC and RC, the Marine Corps Expeditionary Force Development system (EFDS) develops, resources, and equips the Marine Corps. EFDS is streamlined and integrated to encompass all phases of concept development, to include the acquisition of essential equipment and weapons systems. The Marine Corps develops an Approved Acquisition Objective (AAO) for each item in its equipment inventory from the EFDS. This identifies all initial issue quantities and planned sustainability requirements for both the AC and RC and equipment modernization plans.

The GWOT has placed a heavy demand and toll on equipment. To meet the demands of current operational requirements, the Marine Corps must properly reset the force in order to simultaneously fight, train and sustain its force while continuing to face a number of ongoing, long term challenges that affect the timing and cost of equipment reset.

#### **D. The United States Navy Reserve (USNR)**

The USNR is seamless and fully integrated into the Navy's total force concept. All RC ships, Maritime Expeditionary Security Force (MESF), Naval Construction Force (NCF), Naval Expeditionary Logistics Support Group (NAVELSG) and Explosive Ordnance Disposal (EOD) units are under the operational control of U.S. Fleet Forces Command. RC aviation commands are under the operational control of Commander, Naval Air Forces. Within the Navy, the RC possesses 100 percent of the organic medium airlift, 75 percent of the adversary training capability, 20 percent of the maritime patrol squadron capability, and 12 percent of the rotary wing capability.

The top three equipping challenges for the USNR are: C-40 aircraft procurement; upgrades for C-130 and C-9 aircraft; and civil engineering, material handling, and communications equipment for GWOT related units.

Achieving RC equipment compatibility with the AC is one of the Navy's top priorities. Navy procurement, upgrade programs and Congressional Adds have improved equipment capability and compatibility over the past several years. However the NCF, MESF, NAVELSG and EOD units' sustainability and interoperability still remain an issue. The Navy continues to stress interoperability as part of the Total Force concept and makes no distinction between the AC and RC.

Significant airlift recapitalization was initiated in FY 1997 when two C-40As were purchased with \$120 million in NGREA funding. Between FY 1998 and 2005, seven more C-40As were purchased with the help of NGREA, Congressional Adds, and Service procurement funding.

The Navy Reserve provides 66 percent of the Navy's combat construction capability to support Navy Component Commanders (NCC) requirements. Immediately following the September 11<sup>th</sup> attack, more than 700 personnel from RC NCF units mobilized and deployed to locations throughout the world to perform construction and force protection projects. Throughout OIF and OEF, nearly 5,900 RC Seabees have deployed, some twice, to support the war. RC NCF assets are critical to ensuring Navy mission support in some of the most dangerous regions of the world.

Necessary upgrades for Navy Reserve aircraft continue to be a top priority. In FY 2008, the C-130T will be tested with new Avionics Modernization Program, making the aircraft fully CNS and Air Traffic Management compliant. Also, the C-9 (average age is over 31 years old) requires avionics upgrades and engine replacement to meet globally mandated noise abatement and navigation requirements.

#### **E. The Air National Guard (ANG)**

The Air Force continues to make significant improvements in modernizing and equipping the ANG and the AFR.

In FY 2005, the AF formalized Total Force Integration resulting in initiatives that assigned new emerging missions to Guard and Reserve units and greatly expanded the number of associated units. RC missions now include using the latest AF weapon systems including the C-17 and F-22A aircraft, MQ-1 and MQ-9 UAVs, distributed ground stations, and Space operations. These

initiatives involve associate relationships between AC and RC units sharing equipment. By 2010, AC and RC forces will share operations on almost every major AF weapon system with one component having primary ownership of the equipment while the other provides only personnel to conduct augmentation and surge operations.

The ANG missions include assignments by State or Federal authorities to support domestic missions in CONUS. To better handle these operations, the National Guard Bureau (NGB) identified 10 core capabilities for HLD that every state and territory must possess. The NGB wants to ensure every State Governor has these “Essential 10” capabilities: a Joint Force Headquarters for command and control; a Civil Support Team for chemical, biological, and radiological detection; engineering assets; communications; ground transportation; aviation; medical capability; security forces; logistics; and maintenance.

The ANG’s Modernization Program is based on validated AF and Combatant Commander requirements. The FY 2007 process determined that the ANG has a \$6.4B modernization and recapitalization shortfall. However, the most significant challenge to ANG readiness is keeping equipment modernized and relevant. The ANG has the oldest aircraft in the Air Force inventory. These aircraft require additional maintenance and upgrades to remain modern viable platforms. As a result, modernization of the ANG fleet to attain capabilities equivalent to newer platforms and meet the war-fighting Combatant Commanders’ taskings is critical to the Air Force.

The ANG has experienced major mission and programmatic changes over the past six years. In support of a Total Force modernizing approach, the ANG is aggressively equipping A-10s and F-16s with LITENING AT Block 1 and Sniper XR Advanced Targeting Pods. The ANG requirement of 193 pods is 80 percent complete, and 24 LITENING AT pods have been upgraded to LITENING Video Data link Pods (VDL) with 28 more to modify. The F-16 Full Combat Mission Trainer (FCMT) program received \$11M in FY 2006 via Congressional action for installation of a four-ship regional training facility at Burlington, VT. Congress added \$52.2M funding in FY 2006 for six ANG F-15C/D AESA systems and an additional \$72M in FY 2007 for eight ANG F-15C/D AESA systems. Procurement of 48 AESA systems is the current minimum requirement for the ANG.

The ANG continues to expand its role in supporting our Nation’s needs, but the need to fully fund ongoing operations and continued pressure on defense budgets has made obtaining adequate funding for modernizing equipment a challenge.

## **F. The Air Force Reserve (AFR)**

The AFR combat support forces continually combine seamlessly with AC forces to satisfy operational employment requirements during contingencies in all theaters of operations.

The AFR has 31 flying wings and 8 associate units that share aircraft with AC units. They also have 8 associate units operating Space mission partnerships including: Satellite Command and Control, Missile Warning; Joint Space Operations Center (JSpOC); Warfare Center Research, Development and Testing; Space Aggressor and the National Security Space Institute. The AFR has more than 620 mission support units equipped and trained to provide a wide range of services including medical and aeromedical evacuation, aerial support, civil engineering, security forces, intelligence, communications, mobility support, logistics and transportation operations.

AFR major equipment shortages include: The F-16's Central Fire Control Computer (CFCC) is a roadblock to capability improvements, a new CFCC is required to support future software upgrades. AFR A/OA-10s have several modernization shortfalls. The Installation of an AAR-47 Infrared (IR) missile warning system and a Helmet Mounted Display/Helmet Mounted Cueing Systems (HMCS) are a few. These systems would increase pilot situational awareness, allow the targeting of advanced weapons, permit the employment of effective threat countermeasures. The B-52H requires a major modification to provide a data link for a situational awareness system to support lengthy mission times.

The HC-130 Combat Search and Rescue (CSAR) is constantly in demand by multiple agencies to support operational and contingencies missions. Many of these airframes have exceeded 40 years of service. Future upgrades include the continued modernization of the C-130 with Yoke Mounted Countermeasures Dispenser Switch, APN-241 navigation and ground mapping radar, Large Aircraft Infrared Counter Measures (LAIRCM) and Real Time Information in the Cockpit to improve aircrew survivability and weapon system reliability. The C-5A does not have defensive system to allow the aircraft to fly in hostile areas. Modifying the C-5A with AAR-47(V)2 Missile Warning System and ALE-47 Countermeasure Dispense System will increase aircrew and aircraft protection, support Air Mobility Master Plan and reduce Operations tempo on current defensive equipped aircraft.

#### **G. The United States Coast Guard Reserve (USCGR)**

The Coast Guard Reserve is fully integrated into the AC. Over 80 percent of the SELRES force is directly assigned to the AC. The remainder of the force is assigned to the eight Coast Guard Port Security Units or to DoD units and staffs. The Coast Guard is continuing its comprehensive review to determine the optimal structure and size of their SELRES. This initiative will realign the manner in which SELRES responds to Maritime HLS, National Defense, and Disaster Response and Recovery missions.

All Coast Guard Reserve equipment is managed by the AC. Equipment for domestic operations is provided from within the Department of Homeland Security (DHS). Equipment for mobilization and surge operations is provided by the AC.

The Coast Guard reports that overall equipment readiness is good and there are no major equipment status issues to date. Equipment is adequate to support Reserve training, and they do not have a requirement for additional equipment.

#### **VI. Conclusion**

Fighting terror at home and abroad has stressed the force and challenges the capability of our Services in maintaining, sustaining and adapting to attrition of equipment. Each military Service is faced with unique challenges as they develop their roles and missions while managing and sustaining equipment. In the following chapters, the Services discuss the strategies they are developing to face challenges from high operational tempo, transformation, and the GWOT.

The ACs continue the total integration of their RCs to ensure a seamless, integrated and interoperable force. At the same time, our RCs are transforming from a strategic reserve posture to an operational force. The Services are continuing to develop new and innovative strategies

such as ARFORGEN and Total Force Integration to develop into more effective, efficient, and relevant forces.

This is an extremely dynamic time of transition for the RCs, and OSD-RA looks forward to working with the Congress and each of the Services to develop strategies and policies that will assist our Soldiers, Sailors, Airmen, and Marines in obtaining equipment capabilities that support their missions.



## **Chapter 2**

### **United States Army Reserve Components**

#### **I. Army Overview**

##### **A. Army Planning Guidance**

The Army is embedded as the bulwark of American might in the Global War on Terrorism (GWOT). While the Army's mission is to secure U.S. interests, both domestically and globally, it is also tasked with providing support to foreign entities as well. Fledgling democracies in both Afghanistan and Iraq depend on U.S. Army assistance in order to take root and thrive. At home, the Army spearheads the Federal Government's response, both humanitarian and martial, when natural disasters occur. The immediate priority of the Army is to win the GWOT.

The gravity of the situation requires the current force to be sufficiently maintained and, if possible, improved. Properly equipping Soldiers, resetting returning units, preparing deploying units and restructuring into modular units to support operational requirements in this ongoing war is a reality that must be achieved. The fielding of new systems and the seamless integration of new technologies and capabilities into existing systems is a result that must be obtained. In the battlefields of today there are no "front lines," which eliminates the advantage of massed forces. Today, Soldiers must be equipped with gear that will minimize risks, increase survivability and highlight the lethal superiority of the American Warfighter.

Since battlefield technology changes quickly, so too must the portability of the acquisition of materiel. The Rapid Fielding Initiative (RFI) allows each deploying Soldier to be issued a standard set of "state of the art" equipment. Additional items are issued to Soldiers in Brigade Combat Teams (BCTs). Items included in the RFI are stored in forward depots throughout the theater, for example in Kuwait. An added benefit of the RFI is the equipping of all of the Army's Active and Reserve components (AC and RC), a key element in the modernization and sustainment of Army readiness.

Even as technology increases exponentially, it is still the Soldier that must conduct the war. Soldiers are the Army's heart and soul. Soldiers must be well trained, well equipped, motivated, and most importantly, well led. In keeping with the mantra that all Soldiers are warriors first, the Army is transforming how we train and educate to better prepare them to deal with the challenges they will face today and tomorrow.

##### **B. Army Equipping Policy**

The tenets of the Army's overarching equipping policy are spelled out in the Army Force Generation (ARFORGEN) model. The Army intends to provide every unit 100 percent of the equipment requirements specified on its standard unit authorization document called table of organization and equipment (TOE). Due to wartime constraints, the Army cannot equip units at the level required by their TOE; consequently, the Army is in a bridging phase in which units receive equipment primarily through new procurement.

The Army synchronizes the war fight with the transformation process through the Army Campaign Plan (ACP). The ACP includes planning guidance for balanced fielding of equipment to AC and RC units to achieve timely and progressive operational readiness for the Army.

The Army G3 sets priorities for equipment fill in accordance with the Department of the Army Resourcing Priorities List (DARPL). The Army maintains visibility of equipment status at all levels. In the objective phase, the Army will manage and account for equipment in unit sets at the highest level of organization practical, such as company, battalion, or brigade, to ensure completeness and oversight of the equipment transfer.

All equipment is considered Army equipment and will be positioned to support the National Military Strategy (NMS). The Army may need to maneuver equipment among components and will use existing guidance, such as DoD 1225.6, to ensure accountability within the RC, Army Commands, Army Service Component Commands and Direct Reporting Units. Component Headquarters will ensure units have the required capabilities to maintain equipment readiness.

The Army's strategy seeks to develop and field combat-capable units through an appropriate mix of organizational restructuring into more modular units, insertion of new capabilities where and when feasible, selective procurement and fielding of new equipment (modernization); and restoring and preserving readiness of current equipment (Reset), including the rebuilding and upgrading of key existing equipment through recapitalization.

### **C. Plan to Fill Mobilization Shortages in the RC**

During a large-scale mobilization, the Army will employ the most practical and efficient means of redistribution. This includes the issue of serviceable warehouse stocks, repair of unserviceable items, procurement, substitution of commercial equipment, and cross-leveling of any excess unit equipment or equipment left behind by deploying units.

Upon mobilization notification, all Army units will validate their equipment on-hand data in their accountability system of record. The Headquarters, Department of the Army (HQDA) will issue prioritization guidance for all AC and RC units based on the needs of the Combatant Commanders, with consideration for modernization, interoperability, and readiness.

### **D. Initiatives Affecting RC Equipment**

#### **1. Current Operations**

The Army's operational pace in support of the GWOT remains high and is placing a tremendous strain on the RC. The ARFORGEN cycle provides predictability and early identification of when units will deploy. Based on the AFORGEN cycle, unit equipment shortages are filled prior to mobilization or in theater with Theater Provided Equipment (TPE). Due to the OEF and OIF, there is limited equipment to train on prior to deploying, and there is limited time to train on the newer equipment prior to the deployment. The amount of equipment available for HLD/HLS requirements is limited and requires close management and cooperation among the components and the States. To bring the RC capabilities in line with future demands, the following four areas must be addressed and will be outlined in the Army's overview of the NGRER: Operationalizing the Reserves, Homeland Security, Reset, and What We Bring to the Fight.

## **2. Operationalizing the Reserves**

General Casey stated that we must adapt our RC by transforming them from a strategic reserve to an operational reserve routinely employed at home and abroad. Transforming the RC will require National and State cooperation, as well as continued commitment from Employers, Soldiers and Families. It will require changes in the way we train, equip, resource, mobilize and sustain the RC.

There are three critical readiness components to operationalizing the Army National Guard (ARNG) and the United States Army Reserve (USAR) on a sustained basis: personnel, training and equipment. United States' sons and daughters are the most critical component of the Army; the equipment provided to them, and the training and leadership they receive, is what will win this war! Training should be executed as much as possible prior to mobilizing a unit. This will shorten the post-mobilization training time and optimize operational time. The Army goal is to fully equip units to 100 percent of the MTOE requirement and to ensure they have the right equipment to train on in the AFORGEN model.

## **3. Homeland Security**

The events of 11 September 2001 exposed the United States at a vulnerable state, and the security of our homeland was changed forever as we now guard ourselves against terrorist attacks. While the United States Army is in charge of land-based warfare, Homeland Security remains a joint service operation. As the role of the RC is redefined and expanded to include multiple overseas deployments, it is clear that units from the ARNG and USAR are also the most likely first responders to natural disasters or catastrophes at home. In 2007, over 100,000 RC Soldiers were deployed to 87 different countries in support to these catastrophic events. The Army needs continued support from Congress to ensure that all RC units are properly manned, trained, and equipped not only to support the GWOT, but also to support these critical Homeland Security missions.

## **4. Reset**

General Casey said, "the Army's third imperative is 'Reset.' We must continue to reset our units and to rebuild our readiness to prepare for future deployments and contingencies. Since 2003, equipment has been used at a rate over five times that programmed, in harsh, demanding, mountain, and desert conditions. In addition to fixing, replacing and upgrading our equipment and retraining for future missions, we also have to revitalize our Soldiers and Families by providing them the time and the opportunity to recover from the cumulative effects of sustained operations. Resetting our force is critical to restoring readiness and building for the future: we will reset for the future, not rebuild the past. We request that Congress that reset continue as long as we have forces deployed and for several years thereafter. The commitment to providing resources to reset our forces is essential to restoring strategic depth and flexibility to the Army."

Reset includes all those activities that return deployed equipment to fully operational standards with upgraded capabilities. The Reset process is where critical materiel lessons learned from OIF and OEF are implemented. Units are reorganized to modular designs; obsolete equipment is replaced, and pre-positioned stocks are reconfigured to be more strategically relevant and responsive.

The goal of Reset is to provide all active duty units a combat readiness level of equipment within six months of their equipment's arrival at home station. RC units will take longer to achieve their desired level of readiness; the goal for them is to reestablish readiness within one year. The Army is working with the Army National Guard (ARNG) and Army Reserve (USAR) to improve the Reset process for returning equipment. This is important not only for preparation to meet requirements for global contingencies, but also in support of homeland security and civil authorities for many different missions within the United States.

## **5. What We Bring to the Fight**

The ARNG and USAR continue to perform homeland security missions superbly. The RC contributions have exceeded expectations in terms of readiness and performance. Reserve forces make up 40 percent of the force in Iraq and Afghanistan, and virtually the entire Balkan contingent.

The stress and uncertainty of the deployments by the RC, coupled with, in some cases, inferior equipment and unfair benefits, has made it a difficult situation for many of these Soldiers. While they must function on the battlefield they also must cope with the knowledge that jobs, family and home will, in many cases, be altered forever upon their return.

General Casey said, "we believe we must continually modernize our equipment to put our Cold War systems behind us and to provide our Soldiers with a decisive advantage over any enemy that they face in the future. We'll continue to rapidly field the best new equipment into the force that is fighting every day, upgrade and modernize existing combat and support systems, incorporate new technologies spun out of Future Combat Systems research and development, and finally, begin to field the Future Combat Systems (FCS) Brigade Combat Teams (BCT) themselves. We're ultimately working toward an agile globally responsive Army that is enhanced by modern networks, surveillance sensors, precision weapons, and platforms that are lighter, less logistics-dependent and less manpower-intensive. It's truly a 21st Century force."

The Army has significantly accelerated the tempo of transformation and continues to adapt the resource processes so they become more flexible, dynamic, transparent, and responsive. Soldiers remain the centerpiece of Army formations.

Through the Rapid Fielding Initiative (RFI), the Army is purchasing and fielding state-of-the-art equipment at an unprecedented pace. Examples are full-fielding of improved body armor to all Soldiers operating in Afghanistan and Iraq, advanced thermal sights, and personal equipment.

The Army also continues to field innovative technology solutions directly to operational commanders through the Rapid Equipping Force (REF). Such innovative solutions include a variety of robotic systems and other technologies used in high-risk searches, technologies to counter improvised explosive devices (IEDs), and extensive improvements in the armor protection of vehicles.

The foundation of the Army's future force is the FCS-equipped BCT with an array of FCS-enabled Heavy BCTs, Infantry BCTs, and Stryker BCTs. The FCS is a comprehensive modernization program internal to Army transformation that will provide the joint team with responsive full-spectrum capabilities. The Army will provide dominant land power to the Joint

Force commander well into the future, and the FCS will increase capabilities and reduce or eliminate vulnerabilities.

#### **E. Plan to Achieve Full Compatibility between AC and RC**

While the AC has enjoyed faster fielding based on both the focus on operational formations and their numerous rotations overseas, the programs for fielding of LOG STAMIS are beginning to focus greater attention on the RC. The following LOG STAMIS systems provide the unit and Army's logistics data and connectivity that support the Soldier from factory to foxhole:

- Property Book Unit Supply Enhanced (PBUSE),
- Standard Army Maintenance System–Enhanced (SAMS-E),
- Unit Level Logistics System–Aviation Enhanced (ULLS-AE),
- Standard Army Ammunition System–Modernized (SAAS-MOD),
- Combat-Service-Support Automated Information System Interface (CAISI),
- Very Small Aperture Combat Service Support Satellite Terminal (CSS-VSAT), and
- Transportation Coordinators Automated Information Management System (TC-AIMS).

PBUSE completed fielding to the total MTOE Army in FY 2007 (all components) with minor ongoing fieldings to new start units and Table of Distribution and Allowance units into FY 2008. ULLS-AE is scheduled to finish MTOE fielding to all components in FY 2008 and SAMS-E in FY 2009. SAAS-MOD is scheduled to field 65 percent of the RC by FY 2009. CAISI, CSS-VSAT, and TC-AIMS are all on track to achieve 70 percent AC and RC fielding by FY 2009. These fielding projections are dependent on continued funding.

## II. Army National Guard Overview

### A. Current Status of the Army National Guard

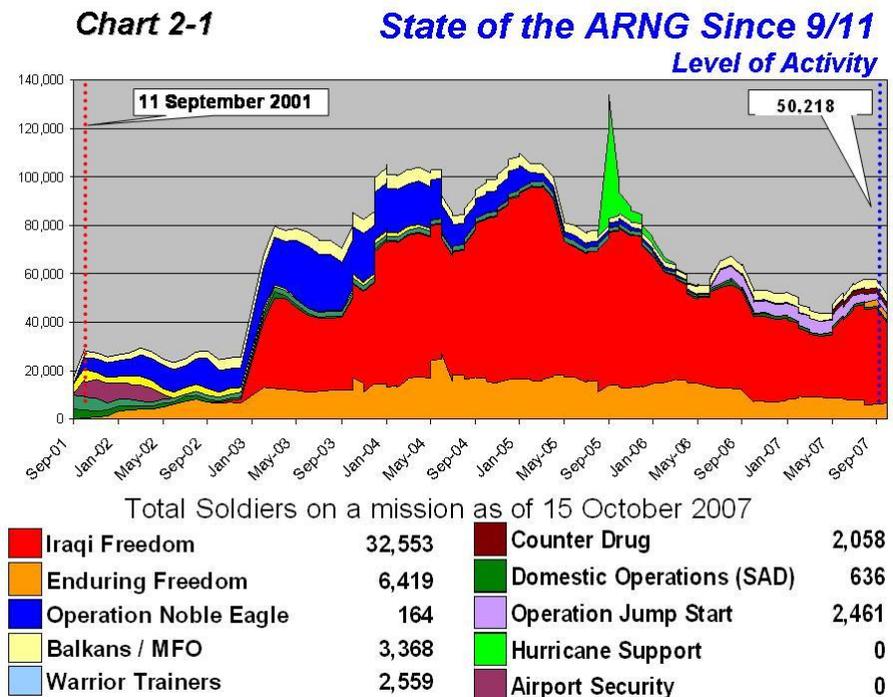
#### 1. General Overview

Army National Guard Soldiers have been fighting the GWOT with their AC counterparts, and securing the homeland since September 11, 2001. The ARNG has a unique role as a dual mission force to respond to the warfight mission and domestic emergencies as directed by the Governors or the Federal government. In recent years, the ARNG has assumed an operational role rather than its traditional role as a strategic reserve. The GWOT, engagement activities in countries across the globe through the State Partnership for Peace initiative (SPP),

**Top ARNG Equipping Challenges**

- Equipment for deployment and pre-mobilization training
- Availability of equipment for HLD/DSCA mission
- Transformation/Modularity

Presidential call-ups in the Balkans and the Sinai, as well as domestic operations guarding the southwestern border and hurricane support, each exemplify the critical capabilities that are provided by the ARNG. Chart 2-1 displays the major missions and troop density over time, with the number of personnel currently engaged in the chart key.



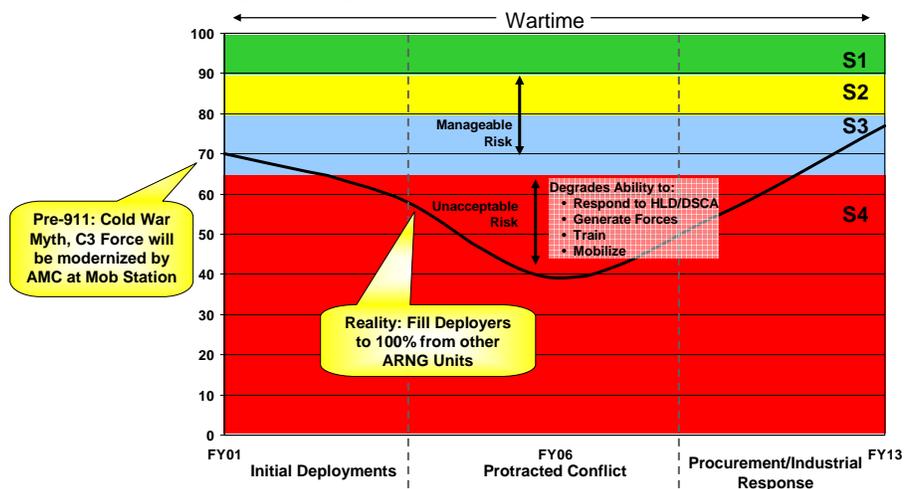
Equipment shortfalls are presenting challenges to the total Army including the ARNG. The availability of ARNG equipment is readiness concern within the Army. Being fully equipped is essential to maintaining a well trained force, quickly deploying combat power to combatant commanders, and quickly responding to domestic missions.

The ARNG was equipped to meet only minimum readiness standards (65–80 percent equipped) during the Cold War period. The paradigm was that when units were required, the units would be modernized and fully equipped at the mobilization station. That expectation failed for GWOT, as characterized in Chart 2-2. The ARNG equipping posture declined from minimum acceptable levels (75 percent pre-GWOT) to significantly reduced levels as non-mobilized units were cross-leveled to fully equip deploying units. Critical equipment was taken from deployed units to form pools of equipment in the theater of operations, identified as theater provided equipment (TPE), causing additional harvesting of equipment from ARNG units here in CONUS to generate the next group of deployers. In all, an estimated 36,424 pieces of equipment were left in theater as TPE. In FY 2007, the Army procurement budget and equipment production tables were turned to improve the equipment levels of the ARNG.

Chart 2-2

## Equipping in a Protracted War

Low equipping levels at initiation of conflict start downward spiral as TPE, battle damage, training sets, etc., draw down inventories.



Due to unit deployments, equipment diversions in theater, and transformation to a modular force, States currently average 61 percent of their modern MTOE equipment on-hand (EOH), and up to 79 percent when in-lieu-of items and substitutes are included. The top three equipping challenges facing the ARNG are: the availability of equipment for deployment and pre-mobilization training, the ARNG’s Homeland Defense (HLD) and Defense Support to Civil Authorities (DSCA) missions, and the transformation to modern, modular MTOEs. The increased equipment requirements associated with GWOT and transformation have strained the equipping posture of the Army and the ARNG. The ARNG’s current equipping posture limits its ability to sustain readiness and conduct HLD missions without Army augmentation. The ARNG must be fully equipped with modern equipment to fulfill the role of an operational reserve (providing a certain number of units on a predictable basis), sustain combat operations in a protracted war, and maintain the ability to train mobilized units and support domestic events.

First and foremost, the ARNG's equipping program is managed to support mobilization and deployment of units in support of the GWOT. Critical events within this effort are equipping for pre-mobilization training, post-mobilization training, and deployment. The ARNG has consistently met its mission to mobilize and deploy forces, but it has required extensive cross-leveling of equipment to fill shortages.

The new 12-month mobilization policy requires the reduction of post-mobilization training to maximize the "boots on the ground" time. It is imperative that ARNG units conduct additional pre-mobilization training that can be validated for deployment. The unit must be provided at least the minimum amount of equipment required to conduct individual and collective training tasks to shorten post-mobilization training. Although there are several modern systems that should be fielded to units up to three years before mobilization in order to allow the unit to be fully trained and effective, equipment must be provided to the unit at least 12-months prior to mobilization. Night vision goggles, crew served and individual weapons, HMMWV weapons platforms, navigation and communication equipment are most critically needed.

The burden of providing pre-mobilization training equipment falls to the ARNG as mobilized units are often designated to perform deployed missions unrelated to their unit type. Post-mobilization training may require equipment and quantities not authorized or on-hand, therefore the requirement competes with needs for pre-mobilization training and domestic response preparedness, directly impacting readiness of the non-mobilized units available to the Governors and for HLD/DSCA missions.

Deploying units are informed of their deployment missions, the equipment to be provided in theater, and the equipment to bring with them. The ARNG's highest priority is to equip deploying units with the best equipment. HQDA, Forces Command (FORSCOM), First Army, and Army Materiel Command all assist with the effort to meet this imperative.

Domestic response is a critical ARNG mission. Ensuring the availability of equipment for this mission is another top equipping challenge for the ARNG. The Chief of the National Guard Bureau (CNGB) has pledged that 50 percent of Army and Air Guard forces will remain in the State at all times to perform their DSCA and HLD missions. All units need to be equipped to provide that support. The CNGB also identified 10 essential capabilities for the GWOT, DSCA, and HLD missions: Joint Force Headquarters and command and control, Civil Support Teams and force protection, maintenance, aviation, engineer, medical, communications, transportation, security, and logistics. The NGB identified, and the Army validated, 342 baseline equipment items that are of great value in HLD/DSCA as well as full-spectrum missions. The goal is to equip units to 100 percent of requirements to ensure that adequate equipment remains in the State when a portion of its forces are deployed.

Today the ARNG has approximately 56 percent equipment on hand (EOH) of the 342 dual-use equipment LINs to meet both HLD/DSCA and Warfight requirements. The CNGB's priority is to procure all 342 dual-use items and to ensure their availability to Governors, States, and Territories.

Section 1826 of the FY 2008 National Defense Authorization Act prescribes two additional National Guard equipment-reporting requirements for the annual NGRER to Congress. The

National Guard must provide: 1) a statement of the accuracy of previous equipment inventory projections provided in earlier NGRERs, and if the projection was not met, an explanation of why it was not met; and 2) a certification from the CNGB setting forth an inventory for the preceding fiscal year of each item of equipment for which funds were appropriated and which was due to be procured during that fiscal year that has not been received by a National Guard unit as of the close of that fiscal year. This provision will result in greater accountability of equipment procured for the ARNG.

As the deployment of units equipped at 100 percent lowers the EOH of the remaining units, it is important to quickly repair and return redeploying equipment to make it available for domestic missions. In FY 2007, HQDA allowed the ARNG to conduct its own equipment repair (Reset) for most returning unit equipment. This has improved equipment availability and reduced risk associated with deployed units not being available for domestic response.

Close collaboration between the NGB and HQDA on domestic response capabilities has provided a bridge to the time when equipping posture improves. In preparation for both the 2006 and 2007 hurricane seasons, the Adjutant Generals of hurricane-prone States and Territories were asked what equipment shortfalls were hampering their response capabilities. In 2007, 2,572 equipment items were issued, loaned, or otherwise made available to the southern coastal States and the islands to mitigate the shortages.

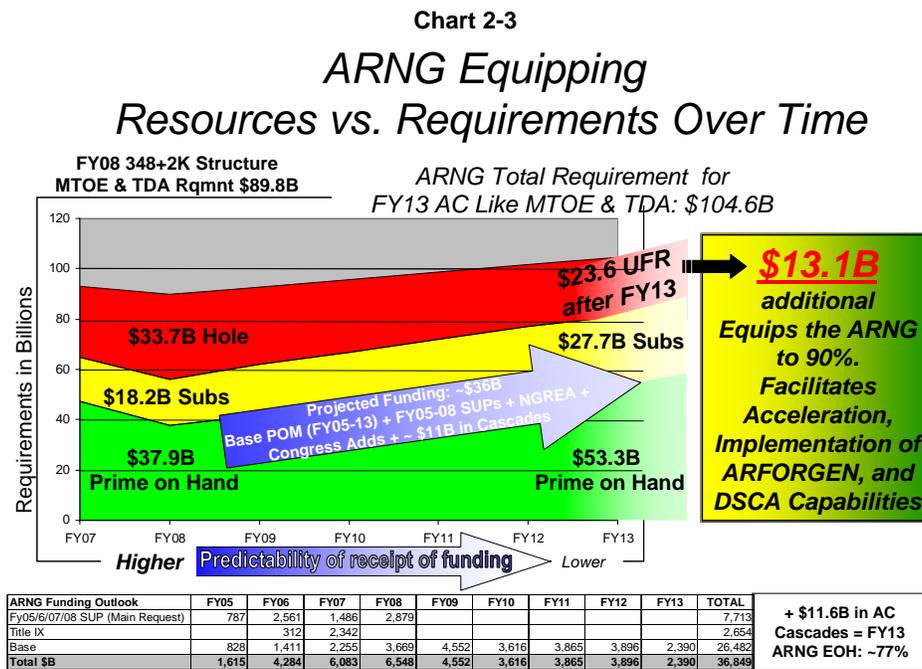
Transformation and modularity also challenge the ARNG's equipping posture. The ARNG has continued to support the Army's goal of restructuring its forces to modular designs offering stand-alone units capable of full-spectrum missions. A goal of the Army Modular Force is to establish one equipping standard for all components and units. Modular units generally require more modern equipment to achieve the net-centric vision and interoperability needs of the Army fighting in a Joint environment. This equipment also has a high benefit to domestic mission requirements as well.

The Army is currently restructuring all of the ARNG combat units and associated support units into modular units. The ARNG reorganization began in FY 2005 and will be completed in FY 2009, with equipment deliveries continuing well beyond 2012. This transformation further organizes and equips the ARNG for the full spectrum of operations demanded by the GWOT through the National Military Strategy, while also including contingency and HLD/DSCA mission sets through NORTHCOM, as well as State and Territorial Governor response needs.

Under the current Army Campaign Plan (ACP), the Army will reorganize, modernize, and fully equip the 34 remaining ARNG Separate and Divisional Combat Brigades into 28 BCTs, while retaining and reorganizing the 8 ARNG Division headquarters. The end state will be 7 Heavy BCTs, 20 Infantry BCTs, and one Stryker BCT. The rest of the ARNG will include at least 78 Multi-functional and Functional Brigade formations.

The ARNG goal is to activate units under the modular organization at their current equipment posture and to provide additional equipment over the timeframe allocated in the ARFORGEN model to prepare for deployment.

The Army and Congress are acting decisively to improve the ARNG's equipping posture. The initial Army programming response was to increase equipment buys for the ARNG by fencing \$21B in procurement from FY 2005 to FY 2011. In the subsequent Program Objective Memorandum (FY 2008–2013) and other Congressional action, the commitment was increased to \$36.8B, plus an anticipated cascade of an additional \$11.6B worth of equipment from AC units. Chart 2-3 demonstrates the increase in funding, the effect that modular design has on requirements, and the resulting equipping posture after the equipment is delivered. On average, there is a two-year lag between the execution of procurement funds and the delivery of equipment to the units. Even though the equipment is due-in, it does not improve unit EOH readiness until it is received.



By modeling the FY 2008 ARNG force structure against modernized authorization documents, it is projected that the dollar value of future requirements will increase from \$89.8B to \$104.6B. When all programmed equipment is delivered (FY 2015), the ARNG will have 77 percent of required equipment, but still have an unfunded requirement for \$23.6B.

HQDA has stated its intent to resource the ARNG to 100 percent of equipment requirements by FY 2019. This will require the programming of approximately \$6B per year from FY 2014 to FY 2019 to fill shortages, modernize equipment, and replace broken equipment.

The ARNG relies on Congress' continued efforts to accelerate closing the \$23.6B shortfall of modernized equipment critical to the ARNG mission. Congressionally-mandated NGREA procurement funds have increased the readiness of the ARNG. NGREA funding has been critical to the ARNG for filling the most critical equipment shortages. The passage of the National Defense Enhancement Amendment in FY 2006 and most recently, the National Guard Empowerment Act contributed directly to improving ARNG readiness. The amendment provided

an additional \$700M in Title IX funds and, in FY 2007, another \$1.0B in Title I funds to procure equipment needed for HLD/DSCA missions. Over time, Congressional support has improved the capability, readiness, and interoperability of ARNG units. Continued Congressional support is essential for improving low ARNG equipment readiness caused by the \$23.6B shortfall in modern equipment.

## **2. Status of Equipment**

### **a. Equipment On-hand (EOH)**

In the past, the ARNG has been resourced at less than 100 percent of equipment requirements. Compounding these EOH shortages is a compatibility issue with AC equipment and how that affects EOH accounting (discussed further in Section 2c). The Army provides guidance on what equipment is considered to be an authorized substitute for primary equipment. While substitutes can be counted in determining EOH, the reality is that much of the substitute equipment does not deploy because it is not the most modern and capable equipment and in some cases is not compatible or interoperable with the Active Army's modern systems. It is our duty to ensure that the troops deployed into combat are equipped with the best equipment possible. The ARNG has had many units resourced below 70 percent for EOH but was required to mobilize units at 90 to 100 percent for all items of equipment. This has required cross-leveling within the ARNG to fill EOH shortages. The ARNG tracks State-to-State directed transfers, but not internal State/Territory transfers. Since the start of the war, over 144,890 items have been directed to be cross-leveled between States/Territories for the ARNG.

ARNG units mobilizing and deploying to OIF/OEF are required to deploy with 100 percent of their required equipment, which is often supplemented with additional mission-unique equipment. To accomplish this, the following process is followed. Units are alerted with pre-existing EOH shortages. The Army determines if a unit will deploy with its full equipment requirement or less, and identifies the equipment in theater that is available for the unit. The unit then determines the remaining shortages needed to meet mobilization requirements. If the State/Territory is unable to fill the unit's shortages internally, ARNG headquarters directs cross-leveling from other States/Territories, or the Army fills the shortages.

Cross-leveling to meet mobilization requirements negatively impacts ARNG unit readiness and presents an equipping challenge for the ARNG. Donor unit EOH is immediately reduced by the loss of equipment, and the ability of units to continue to train without the necessary equipment becomes both a unit and State/Territory challenge. The high rate of cross-leveling causes a downward spiral effect on unit readiness. Cross-leveling equipment decreases the ARNG's ability to sustain the force, which increases training time required, which means equipment is not available until late in the cycle, so pre-mobilization training shifts to post-mobilization. Increased post-mobilization training decreases "boots on the ground (BOG)" time in theater; and decreased BOG increases the rotation of units, which requires more equipment.

Reducing post-mobilization training time is critical to strength maintenance and efficient use of the ARNG and is dependent on having the right equipment available to the unit long before mobilization. There is also a cost to the donor State/Territory for packaging and shipping the equipment to the gaining unit. While cross-leveling has allowed the ARNG to meet its requirements, the need for constant cross-leveling has proven to be both a financial and a

manpower challenge. It also affects the ability of States and Territories to respond to HLD/DSCA missions.

In prior years, upon leaving theater, some units were required to leave their equipment as TPE for use by follow-on forces of all components and Services. The ARNG is working with HQDA to maintain accountability of ARNG equipment that has become TPE. The purpose is to develop payback, return, or replacement plans in accordance with DoDD 1225.6 and the John Warner National Defense Authorization Act (NDAA) for FY 2007. Since OIF and OEF were initiated, the ARNG has been directed to leave approximately \$3.8B of TPE in-theater. States and Territories have also reported total equipment losses of approximately \$339M: \$257M in battle loss, \$8M in Financial Liability Investigation of Property Loss (FLIPL), \$3M in Reports of Survey (ROS), and \$71M in washout equipment losses.

Although some additional equipment is still retained in theater as ARNG units redeploy to home station, the amount of equipment typically left behind has been greatly reduced. HQDA has aggressively pursued payback of retained ARNG equipment. Approximately 91 percent of the items that were withdrawn in the first few years of the war are scheduled for payback. The FY 2007 Bridge Supplemental provided \$1.7B to initiate procurement for a significant portion of the ARNG withdrawals. The Army is currently working on validating another \$1.4B for replacement of additional ARNG equipment.

TPE transfers have affected ARNG equipment for unit readiness, training of personnel, and the mobilization of units, but repayment actions are progressing. For example, the ARNG has left 2,256 M998-series trucks in theater to date and has received solutions for 2,087 vehicles, which leaves a balance of 169 vehicles. Most of the equipping solutions are slated for new production starting in the third quarter of FY 2008, and these will provide the much-needed capability.

#### **b. Average Age of Major Items of Equipment**

The majority of ARNG equipment was received through cascade from the AC; consequently, the equipment is now near the end of its projected service life. The ARNG relies heavily on its depot maintenance programs to prolong the life of this older equipment and to keep readiness rates at or near Army standards. Shortages of maintenance technicians and persistent shortages of repair parts for older equipment add to each unit's burden to maintain older systems. One example is the M939-series truck, which has an obsolete power train; the MT654 Allison Transmission used by the M939-series has not been in production for almost five years. One of the ARNG's primary compatibility concerns is that the primary systems are aging faster than they can be replaced or rebuilt. HQDA has estimated that approximately \$2B per year is required just to replace obsolete equipment with no improvement in readiness. Pure fleetling with like AC items is the best way to keep the ARNG a viable resource to the Army during war. *Table 2* provides the average age of major items of ARNG equipment at the beginning of FY 2008.

#### **c. Compatibility of Current Equipment with AC**

GWOT deployments primarily to OIF and OEF continue to demonstrate issues with compatibility. It is difficult to locate repair parts for systems no longer in the AC system. In addition, obsolete ARNG equipment is less interoperable with modern AC equipment. For example, many ARNG communications and electronic systems are not interoperable and have

less capability than the systems being used by the AC on the battlefield. For this reason Combatant Commanders restrict the older equipment from theater. The Army considers the following equipment non-deployable: M16A1s (substitutes for M249 Squad Automatic Weapons), M800-series 5-ton trucks (substitutes for FMTVs or M900-series 5-tons), VRC-12 radios (substitutes for SINCGARS), PVS-5 and older night vision devices (substitutes for PVS-7 and PVS-14), and the Dragon anti-tank guided missile launch system (substitutes for Javelin anti-tank missile system). Almost all of the ARNG support units' high technology and modern equipment was left as TPE after the first two rotations. Much of the remaining equipment in the ARNG inventory is considered non-deployable due to its age or lack of compatibility with equipment currently being utilized by the AC.

#### **d. Maintenance Issues**

While the ARNG continues to maintain equipment to the Technical Manual 10/20 standard, the mobilization and shortage of key State/Territory maintenance technicians, and repair part problems create maintenance readiness challenges. Maintenance technician staffing is funded at 62 percent during peace time. Maintenance surges to meet mobilization requirements are accomplished with normal limited peacetime OPTEMPO funding, pending the release of operational funds. The ARNG hires temporary technicians to alleviate the shortage of State maintenance technicians lost to mobilization. However, due to the personnel costs associated with mobilization, the States, on average, hire one temporary technician for every five maintenance technicians lost to mobilization. This results in an overall reduction of 71 percent of maintenance technician staffing during mobilization.

The majority of ARNG equipment, primarily trucks and combat tracked systems that remain in CONUS, are older models which have a scarcity of repair parts. *Table 2* indicates the average age of equipment, and as noted, a large percentage of the ARNG fleet of rolling stock is considered non-deployable and in some cases obsolete.

Depot maintenance funding is key to maintaining readiness of the ARNG fleet. Depot overhaul and rebuild programs sustain ARNG EOH and extend the service life of its aging fleet. Currently, the ARNG depot maintenance program is funded at \$370.3M or 69 percent of its total requirement in FY 2009. Funding for the total program averages 72 percent from FY 2009 through FY 2013.

Tactical Wheeled Vehicle (TWV) depot funding increases from \$174.4M in FY 2009 to \$190.9M in FY 2013. This program is funded at an average of 82 percent of requirements from FY 2009 through FY 2013. Funding for combat vehicles increases from \$46.7M in FY 2009 to \$75.5M in FY 2013. This program is funded at an average of 52 percent over this period.

ARNG funding for the category known as "other equipment" is funded at an average of 75 percent from FY 2009 through FY 2013. This funding supports calibration programs, depot maintenance of construction and engineering equipment, weapons, and watercraft. Funding for missile systems averages 72 percent of total requirements from FY 2009 through FY 2013 while the depot maintenance aviation program is funded at an average of 78 percent of requirements over this same period.

ARNG depot funding for communications and electronics equipment decreases from \$2.9M in FY 2008 to \$1.3M in FY 2009. This commodity is funded at an average of 18 percent from FY 2009 through FY 2013. The low level of funding for this commodity is due to the high total requirements identified for both late deployers and non-deployable units.

The ARNG will continue to rely on Army funding and Congressional supplemental funding to procure modern equipment to fill existing shortages. Depot maintenance will remain a challenge until the older/obsolete equipment is eliminated from the inventory. The ARNG's immediate goal is to eliminate the 5,069 M800-series 5-ton trucks and 10,870 M35 series 2½-ton trucks that are non-deployable and considered obsolete. The decrease in reliability of these vehicles has created challenges in the HLD/DSCA mission areas as well. Modular conversion will fund some replacements, but because of the growth in requirements for wheeled vehicles, the ARNG is dependent on Congressional additions to Army funding and NGREA procurement.

#### **e. Modernization Programs and Shortfalls**

Some of the ARNG's top modernization shortages are listed below and also in *Table 8*. These systems all have unfunded requirements that are not currently projected to be filled through Army procurement for modularity, NGREA, or Congressional Adds.

##### **i. Army Battle Command System (ABCS) Suite of Systems**

ABCS enables a digital battlefield that frames the architecture of every stationary and moving platform in the battle space. It employs a mix of fixed/semi-fixed installations and mobile networks and will be interoperable with theater, joint, and combined command and control systems. Key to the ability of the ARNG to become fully interoperable with the Army, these systems are critical to the modernization of the ARNG. All of the ARNG requirements for these systems have not been fully resourced. There is a shortage of 1,358 ABCS at a cost of \$120M.

##### **ii. Chemical Decontamination and Detection Systems (JSTDSS-SS and ICAM)**

The M17 Lightweight Decontamination System (LDS)/Joint Services Transportable Decontamination System–Small Scale (JSTDS-SS) are compact, lightweight, portable decontamination systems. The JSTDS-SS will replace the LDS system on a one-for-one basis as the M17 is no longer in production. This system supports both combat operations and HLD missions. JSTDS-SS/M17 shortages will continue through FY 2010 due to currently requested funding levels. The older models of the M17 LDS are difficult and costly to sustain and repair parts will continue to be more and more challenging to acquire. Current shortages include a total of 1,633 systems at a cost of \$90.9M.

##### **iii. Family of Medium Tactical Vehicles (FMTV)**

The FMTV consists of the Light Medium Tactical Vehicle (LMTV) or 2½-ton vehicle fleet and the Medium Tactical Vehicle (MTV) Family 5-ton variants. The FMTVs are the essential supply and recovery vehicles for ARNG units. They form the nucleus of support operations at all echelons and are essential components for all force modernization objectives. The Army National Guard (ARNG) currently owns over seventy percent (70 percent) of the M35/800/900 2½-ton and 5-ton vehicles in the total Army inventory. The legacy vehicles are expensive to maintain, prone to mechanical failure, and are considered non-deployable assets for most

missions. Under the Army plan for modernization of the medium truck fleet, the goal is to replace the obsolete 800 and 900 series vehicles by FY 2020 and the M35 by FY 2010. The older model trucks continue to be readiness issues because of requirements for increased maintenance due to the age of the fleet (20–35 years) and the difficulty in obtaining repair parts. The ARNG is currently short 5,766 FMTVs at a cost of \$1.63B.

#### **iv. Heavy Tactical Vehicles (HTV) (HEMTT, HET, PLS, M915)**

The ARNG has a total HTV shortfall of 4,100 vehicles at a cost of \$1.06B. The HEMTT family consists of four configurations: Fuel, Cargo, Wrecker and LHS (Load Handling System). The PLS family consists of a 16.5-ton payload tactical truck, the M1076 trailer, CHU and CROP. The PLS transporter will operate across all tactical mobility levels in the combat zone in a variety of combat arms, combat support (CS), and combat service support (CSS) units.

#### **v. High Mobility Multipurpose Wheeled Vehicle (HMMWV)**

The total shortfall for the ARNG is 19,832 vehicles at a cost of \$4.1B. The HMMWV is produced in several configurations to support weapons systems, command and control systems, and utility vehicles. The Armored HMMWV has organic armor that can protect Soldiers from most anti-tank mines and small arms. There are three new models currently being produced: the M1151A1 Armament Carrier, the M1152A1 Utility Vehicle, and the M1165A1 Command and Control Vehicle. All vehicles are built ready to accept armor as required. All components will begin receiving these vehicles in the last quarter of FY 2007. Proposed fielding numbers fall short of requirements and modernization of the ARNG HMMWV fleet.

#### **vi. Thermal Weapon Sights**

The AN/PAS-13 is a family of three Thermal Weapon Sights (TWS). The three versions are designed for hand held use and/or mounting on individual and crew-served weapons. They operate in both daylight and darkness, through obscuration, at various effective ranges. They have a standard video output used for training and image transfer to a monitor for remote viewing. Thermal imaging allows units to continue day or night operations during degraded visual conditions caused by smoke, fog or dust. This item has a total ARNG shortfall of 13,542 systems at a cost of \$210.8M.

#### **vii. Tactical Water Systems (TWPS)(HIPPO)(CAMEL)**

The Tactical Water Purification System (TWPS) is a skid-mounted, generator-powered system. TWPS is capable of producing potable water from any available raw water source at a rate of 1,200 to 1,500 gallons of water per hour (GPH). The Tank Water (HIPPO): 2,000 Gallon Dismountable International Standardization Organization (ISO) Configured, HIPPO, is a mobile hard wall system mounted on an ISO Tank Rack and provides both bulk and retail water distribution capabilities. The HIPPO provides the ability to transport, store, and distribute potable water using the HEMTT-LHS, or similar vehicle as the prime mover. The Unit Water Pod System (CAMEL) consists of a 900 gallon capacity water pod mounted on a MTV Trailer. The system is designed to receive, store, issue, and transport potable water to meet requirements for all types of units. The Major Component Item (MCI) is a heater/chiller unit, which chills water for palatability, or heats it to prevent freezing.

### **viii. Radar (Enhanced TPQ-36)**

EQ-36 will provide Soldiers with the capability to detect, classify, track and determine the location of enemy indirect fire such as mortars, artillery and rockets—significant threats to allied Soldiers fighting the War on Terror—in either 90 degree or 360 degree modes. EQ-36 systems will eventually replace aging TPQ-36, TPQ-37 and other Cold War era radars, which only operate in limited 90 degree modes. The ARNG is currently short 84 systems at a cost of \$13.4B.

### **ix. Aviation Systems (CH-47F, UH-60 A to L MOD, UH-60M)**

The current aviation system shortfall is 1,179 systems at a cost of \$14.4B. The CH-47 Chinook is an indispensable tool for the combat commander and a critical part of the continuing GWOT. It is the only heavy lift cargo helicopter in the Army inventory. CH-47s are also critical during peacetime for disaster relief operations, fighting forest fires, hurricane relief operations, and other critical missions as employed by the State and Local governments. The new CH-47F is superior to the CH-47D in that it is equipped with more powerful T55-GA-714A engines that provide increased lift and extended range, an avionics upgrade for increased situational awareness and airframe stiffening to reduce vibration, stress, and fatigue. The current ARNG CH-47 fleet consists of older D model CH-47s, with an average age of 25 years of service. Compounding the CH-47D's deterioration from age, world-wide utilization, and losses due to combat and accidents is that additional CH-47 assets are needed in order to fill the modular aviation units currently in the OIF/OEF deployment cycles and meet other HQDA and State requirements.

The UH-60 Blackhawk is the Army's workhorse rotorcraft, performing vital missions on a daily basis. Wherever the Army National Guard is deployed, you will find UH-60s providing MEDEVAC, lift, and transportation of Soldiers and supplies. The new UH-60M Blackhawk is an indispensable tool for the combat commander and a critical part of the continuing GWOT. When compared to older UH-60A/L model aircraft, the UH-60M has an improved crashworthy external fuel system, improved IR suppression, significantly more powerful GE 701D engines, improved durability gearbox w/rotor brake, wide chord blades for increased durability, folding composite stabilator with active vibration control, integrated digital cockpit w/digital map, and an enhanced laser warning system. Modernization to the UH-60M is a combat multiplier essential for ARNG mission success in the Homeland as well as the Warfight.

### **f. Other Projected Equipment Issues**

Refer to Table 8 for detailed shortages and requirements for ARNG projects that have continuing shortages and challenges.

### **B. Changes Since Last NGRER**

As previously stated, Congressional appropriations such as the NGREA are used to fill equipment shortages and replace obsolete equipment within the RC inventories. ARNG funding within this program continues on an upward trend with significant increases during FY 2006. The FY 2003 NGREA funding was \$30M, and was increased in FY 2004 to \$99.3M, and in FY 2005 to \$110.6M. The FY 2005 funding consisted of \$16M of Title IX funds and \$94.6M of Title III funds. That pace picked up with the passage of the National Guard Homeland Security and Emergency Response Equipment Amendment in FY 2006. This amendment was passed to

compensate for the losses of equipment and to gear up for HLD/DSCA missions, natural and manmade disasters, as well as the on-going support of the GWOT. The ARNG received \$700M in Title IX funds and \$30M in Title III funds in FY 2006. The NGREA funding for FY 2006 further increased by \$16.3M in Title I funding for the procurement of equipment lost in the Gulf Coast States during hurricanes Katrina, Rita, and Wilma. The NGREA funding for FY 2007 was \$75M in Title III funds and another \$1B in Title IX funds. In FY 2008, the ARNG received \$645M in NGREA Title III and some \$700M in Congressional Adds.

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### **C. Future Years Program (FY 2009–FY 2011)**

The ARNG equipping program is dynamic in optimizing resources and equipment against evolving requirements. Satisfaction of equipment requirements for a fluid list of mobilizing units and changing missions prompts a continuous re-evaluation of equipping plans. Additional equipping requirements are being developed for CBRNE (Chemical, Biological, Radiological, Nuclear, or High-Yield Explosive) Consequence Management Response Force (CCMRF) units as well as other units to be added to ARNG force structure under the "Grow the Army and Rebalance" initiative.

The Army must fully equip three separate ARNG Brigade size units to serve as regional CCMRF capability beginning in FY 2009.

Under "Grow the Army and Rebalance," the ARNG will activate support units comprised of 6.3 thousand personnel during the FY 2008 to FY 2013 timeframe. The Army has programmed \$6.6B to fund this effort.

#### **1. FY 2013 Equipment Requirements**

The majority of the equipment scheduled for procurement and delivery in FY 2013 will be for modular transformation. Although there is no formal cascade plan, each year the ARNG acquires equipment from the Army and occasionally from other Services. The Army plans to use equipment coming out of depot Reset as well as new procurement to fill requirements.

## **2. Anticipated New Equipment Procurements**

### **a. Joint Cargo Aircraft**

The Joint Cargo Aircraft (JCA) program will provide new aircraft for the ARNG to replace the aging C-23 Sherpa, and new missions for Air National Guard units (ANG) that will lose aircraft as a result of the 2005 Base Realignment and Closure (BRAC). A Memorandum of Agreement (MOA) was signed by the Army and Air Force on 20 Jun 06, establishing JCA as a “Joint” requirement. A firm-fixed price contract was awarded on 13 June 2007 estimated at \$2.4B for procurement of up to 78 JCA (C-27J Spartan). However, while this contract represents a positive step forward, the decision is under protest. Efforts to either shift responsibility for the program to the Air Force or restrict funding are on hold until intra-theater airlift analyses are completed. This may result in lengthy delays in the program which directly impact National Guard units. Without this program, the ARNG will not be able to provide responsive, flexible, and tailored airlift for combat, humanitarian operations, and homeland defense. Ensuring that the JCA program moves forward without delay is important to all 21 states with ARNG and ANG fixed wing units.

### **b. Small Unmanned Aircraft Systems (SUAS)**

The Raven (SUAS) is another UAV system coming to the ARNG. Each BCT will receive 15 SUAS 3-ship systems; however no Army funding is available in POM 2008–2013 to procure the Raven SUAS to fill ARNG requirements. In addition the ARNG has a valid doctrinal requirement for 8 “Warrior” Extended Range/Multi-Purpose (ER/MP) UAS (1 system per Combat Aviation Brigade), however the Army Acquisition Objective (AAO) has not yet been adjusted to reflect this requirement, nor has funding yet been programmed or planned in POM 2008–2013 or the Extended Planning Period (EPP) to procure the required ARNG “Warrior” systems.

## **3. Anticipated Transfers from AC to ARNG**

The Army is developing projections for expected equipment transfers to the ARNG for FY 2008. Equipment for modular transformation will be from new procurement and equipment issued from depot rebuild or repair programs. The ARNG staff is actively working with the Army staff to determine if equipment will be cascaded to fill modular conversion requirements in addition to new procurement. If equipment is cascaded to the ARNG, the condition of the equipment and the decision on how much will be submitted through Reset prior to cascade to the ARNG will be critical in modernizing the ARNG inventory. All HMMWVs going through Reset will either be an upgraded, rebuilt HMMWV or one that is brought up to 10/20 standards. Potential cascaded equipment is shown below:

- Combat Tracked Vehicles: M1A1 AIM Abrams Tanks, M2A2 ODS Bradley Fighting Vehicles, and M3A2 ODS Cavalry Fighting Vehicles
- Tactical Wheeled Vehicles: Reset FMTV, Reset M900-series 5-ton truck variants, Reset HMMWVs, HEMTT basic model variants, heavy trucks such as Heavy Equipment Transport (HET), M900-series line haul tractors and trailers, tracked and wheeled engineer equipment

- Power Generation: Diesel small, medium and large generators
- M16A4 Rifles
- UH-60 Blackhawk helicopters.

#### 4. Anticipated Withdrawals from ARNG Inventory

The ARNG anticipates receiving new, rebuilt/Reset and cascaded equipment that will allow the withdrawal of the following models of obsolete equipment. Shown below are the systems considered as obsolete and scheduled to be replaced in comparison with the newer replacement system. The ARNG will continue to retire legacy aircraft, UH-1 and OH-58A/C aircraft in accordance with the ACP, with all aircraft out of the inventory by FY 2009 and FY 2014 respectively.

System	Replaced By
M35 2½-ton Truck Variants	LMTV
M800-series 5-ton Trucks	FMTV
M60 Machine Gun	M240B Machine Gun
M109A5 and earlier Howitzers	M109A6 & M777 Towed Howitzers
M1 and M1A1 Tanks	M1A1 AIM
M2 BFV	M2A2 ODS
M3 BFV	M3A2 ODS
M113 APC Variants	M113A3, M577A3, M1064A3, M548A3 and M1068A3
VRC-12 Series Radios	SINGARS ASIP Radio Systems
OH-58A/C Scout Helicopters	UH-72A LUH
UH-1H/V Utility/MedEvac Helicopters	UH/HH-60A/L Utility/MedEvac Helicopters
PVS-4/5 Night Vision Goggles	PVS-14 Night Vision Goggles
Dragon Anti-Tank Systems	Javelin Anti-Tank Systems
AH-64A Attack Helicopters	AH-64D Attack or ARH-70A Recon/Attack Helicopters
OH-58D Recon/Attack Helicopters	ARH-70A Recon/Attack Helicopters

#### 5. Remaining Equipment Shortages and Modernization Shortfalls at the End of FY 2013

##### a. Aviation

The current plan to fill and modernize the ARNG attack helicopter fleet is based on the Heavy/Light Attack Mix Study for AH-64D Longbow Apaches and ARH-70A Armed Reconnaissance Helicopters (ARH). For the ARNG, this means a total of 96 AH-64D (4 battalions with 24 each) and 150 ARH-70A (5 squadrons with 30 each). This will fill existing ARNG attack aircraft shortages and provide an ARNG attack fleet comprised entirely of modernized aircraft.

The ARNG still has an existing shortfall of approximately 114 UH/HH-60 aircraft as of August 2007 (approximately 668 of 782 authorizations). Filling these shortages is the first priority, and HQDA projects completion of full fill by the end of FY 2009, with a mixed ARNG fleet of mostly “A” models, some “L” models and a limited number of “M” models. The next priority will then be to replace and/or upgrade older UH/HH-60 “A” models with the most modernized “M” model, which is planned to be complete in the FY 2025 timeframe. In FY 2008, HQDA will begin fielding the UH-60M to the ARNG, having fielded 42 by the end of FY 2009. The UH-60 “A to L” remanufacture production line is transitioning to a UH-60 “A to M” program in the beginning in FY 2008.

The ARNG has a CH-47 requirement for 159 aircraft with 131 currently on-hand. The CH-47 shortage of 28 will persist through at least FY 2015. This is due to the continuing long-term requirement for aircraft hulls to feed the CH-47D to CH-47F conversion line. Although the ARNG will start to receive some CH-47F aircraft as trade-outs prior to 2014, the overall fill level of the ARNG will not improve until additional aircraft are received off the line in about FY 2015, with full fill expected by end FY 2018. The only manner in which the ARNG CH-47 overall shortfall of approximately 28 CH-47s can be filled earlier is through an additive procurement of new CH-47Fs to the inventory. The projected ARNG interim fill level of 131 may become worse dependent on combat and other losses to the Army CH-47 inventory.

The ARNG is currently authorized 30 OH-58D Kiowa Warrior aircraft in the 1-230 Air Cav Sqdn, with 26 on-hand as of August 2007 (4 short). The 4 aircraft OH-58D shortfall will be filled by the second quarter FY 2008. Integration, testing and evaluation for the ARH-70A ARH program continues through FY 2008 and FY 2009. The ARH will replace the OH-58D across the Army and some AH-64A Apaches in the ARNG. ARH fielding for the ARNG begins in the 1-230 Air Cav Sqdn in FY 2012.

The Army UH-72A Lakota Light Utility Helicopter (LUH) program has moved from programming and testing into active execution. The ARNG is projected to receive 200 UH-72As—92 for MTOE units (6 Security and Support Aviation Battalions of 32 each) and 8 for the Eastern ARNG Aviation Training Site that will support UH-72A qualification training for the Army. ARNG fielding of this versatile aircraft begins with 12 UH-72As in FY 2008 to the hurricane-prone states. Over the next four years (FY 2009-12) the average number of UH-72s planned for the ARNG is only 18 per year. Accelerated fielding is dependent on additional procurement during these years.

## **b. Transportation**

Retiring significant fleets of older generation trucks such as the M-35 and 800 series within the National Guard will pose a significant challenge without proper funding beyond FY 2010.

## **c. Nuclear, Biological, and Chemical (NBC) Defense**

We will continue to experience a shortage of collective protection and decontamination systems. The primary goal is to procure sufficient quantities to support HLD/DSCA as well as provide battlefield protection for deployed units and support to the GWOT. Improved Chemical Agent Monitors (ICAMs) are considered a critical HLD/DSCA asset for each ARNG State and Territory.

#### **d. Power Generation**

The ARNG's primary goal in power generation is to eliminate the obsolete gasoline generators (single fuel requirement) and eliminate unreliable, obsolete models of diesel generators to improve readiness. Generators range from the smaller 3 and 5 kilowatt (kW) capable models up to the larger 30kW and 60kW models. The Tactical Quiet Generator (TQG) is being fielded by the Army to achieve these goals. The majority of the ARNG TQG shortfall lies in the smaller 3kW and 5kW model. Current fielding of 5-60kW generators are primarily for high priority units. If funding remains constant, the completion of the fielding will take 8 to 10 years.

#### **D. Summary**

The role of the ARNG has changed dramatically over the past six years from a strategic reserve to an operational reserve. Many units have and will be committed to the warfight and all units must be ready to perform HLD missions. While the Guard has become fully manned and continues to grow, the focus has clearly shifted to equipping requirements. The changes in roles and missions require units to be fully equipped with modern equipment. The Army and Congress are acting decisively to improve the ARNG equipping posture. They have made great progress over the past several years and remain committed to fully equipping and modernizing the ARNG by FY 2019. As the Army projects future equipment requirements and funding, the ARNG needs Congress to annually appropriate funds for current year procurement to ensure that the ARNG has all the essential equipment on-hand. The ARNG looks forward to meeting the challenges of fully equipping and modernizing its forces, and it relies on Congress' continued efforts to accelerate closing the \$23.6B modern equipment shortfall. With modern equipment the ARNG will be better able to perform all of its missions.

## Consolidated Major Item Inventory and Requirements

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
<b>AIRCRAFT - ROTARY WING</b>							
HELICOPTER, ATTACK AH-64A (APACHE)	H28647	\$10,680,000	142	142	142	142	0
HELICOPTER, ATTACK AH-64D (APACHE)	H48918	\$25,128,800	61	65	65	65	220
HELICOPTER, CARGO CH-47D (CHINOOK)	H30517	\$5,000,000	133	138	145	149	213
HELICOPTER, CARGO CH-47F (CHINOOK)	C15172	\$30,000,000	0	0	0	12	12
HELICOPTER, OBSERVATION OH-58A (KIOWA)	K31042	\$92,290	186	186	186	186	0
HELICOPTER, OBSERVATION OH-58C (KIOWA)	H31110	\$190,817	61	61	61	61	0
HELICOPTER, OBSERVATION, OH-58D (KIOWA)	A21633	\$4,075,800	24	24	24	24	30
HELICOPTER, UTILITY, UH-1H (IROQUOIS)	K31795	\$922,704	48	48	48	48	0
HELICOPTER, UTILITY, UH-1V (IROQUOIS)	H31872	\$948,158	51	51	51	51	60
HELICOPTER, UTILITY, UH-60A (BLACK HAWK)	K32293	\$4,635,000	473	473	473	473	300
HELICOPTER, UTILITY, UH-60L (BLACK HAWK)	H32361	\$4,855,000	167	176	176	176	464
HELICOPTER, UTILITY, UH-60M (BLACK HAWK)	H32429	\$8,000,000	0	0	10	10	10
HELICOPTER, MEDEVAC, HH-60L	U84291	\$7,908,000	7	7	7	7	0
HELICOPTER, MEDEVAC, HH-60Q	U84541	\$7,908,000	4	4	4	4	0
HELICOPTER, LIGHT UTILITY, UH-72A	H31329	\$4,400,000	0	2	2	2	15
HELICOPTER, ARMED RECONNAISSANCE (ARH)	Z00691	\$760,000	0	0	20	37	144
<b>AIRCRAFT - FIXED WING</b>							
AIRPLANE, CARGO TRANSPORT, C-12D	A29812	\$1,967,301	8	8	8	8	1
AIRPLANE, CARGO TRANSPORT, C-12F	A30062	\$3,068,422	24	24	24	24	45
AIRPLANE, CARGO TRANSPORT, C-12T	BA108Q	\$2,150,000	7	7	7	7	0
AIRPLANE, CARGO TRANSPORT, C-23B	A29880	\$7,424,158	38	38	38	38	53
AIRPLANE, CARGO TRANSPORT, C-26	A46758	\$800,000	8	8	8	8	11
<b>AIRCRAFT SUPPORT EQUIPMENT</b>							
UH-60A EXTERNAL STORES SUBS	E21985	\$676,111	89	89	89	89	522
HOIST, HIGH PERFORMANCE	H39331	\$111,580	177	177	177	177	490
POWER UNIT AUXILIARY, AVIATION (AGPU)	P44627	\$201,060	145	147	147	147	208
COMMAND SYSTEM, TACTICAL, AN/TSQ-221	C61597	\$3,000,000	12	14	15	15	39
RADAR SET, AN/TPN-31	R17126	\$3,701,502	10	15	17	17	17
RADIO SET, HF, AN/VRC-100(V)1	R81691	\$33,707	165	165	165	165	217
SHOP EQUIPMENT CONTACT MAINT (SECM)	S30224	\$10,500	2	2	37	37	349
TEST FACILITIES KIT, MK-994/AR	V61444	\$20,894	142	142	142	144	237
TEST SET, INSTRUMENT DISPLAY SYSTEM BENCH	T20861	\$76,859	71	131	133	133	106
TEST SET LINE, ADV FLIGHT CONTROL SYS CH-47D	T81985	\$71,921	86	88	90	90	76
TEST SET, TRANSPONDER, AN/APM-305	V99436	\$35,182	50	50	50	50	126
TOOL KIT TUBE SWAGING, SET B	T57982	\$29,168	45	102	102	102	242
TOOL SET, AVIATION FOOT LOCKER SPT PM ACFT	T65997	\$5,000	600	600	600	600	834
<b>ARTILLERY &amp; MISSILE</b>							
COMMAND LAUNCH UNIT, JAVELIN	C60750	\$126,824	677	1,189	1,332	1,332	3,028
FIRE UNIT VEHICLE MTD, AVENGER	F57713	\$1,090,277	266	266	266	266	264
HIGH MOBILITY ARTILLERY ROCKET SYS (HIMARS)	H53326	\$2,500,000	43	95	114	152	216
MULTIPLE LAUNCH ROCKET SYSTEM (MLRS), M270	L44894	\$1,055,696	228	228	228	228	16

## Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
LAUNCHER, TOW II ATGM M220A1	L45740	\$133,000	750	750	750	750	20
LAUNCHER, MLRS IMPROVED, M270A1	M82581	\$2,168,500	56	56	56	56	54
TARGET ACQ SYS, TOW IMPROVED ITAS M41	T24690	\$920,000	175	251	251	251	748
TRAINING SET, MOVING TARGET SIMULATOR (STINGER/REDEYE)	X04802	\$4,377,780	1	1	1	1	52
HOWITZER, MEDIUM, SP, 155MM, M109A6	H57642	\$1,435,000	340	340	340	340	293
HOWITZER, MEDIUM, SP, 155MM, M109A2-A5	K57667	\$758,038	247	247	247	247	23
HOWITZER, LIGHT TOWED, 105MM, M119	H57505	\$1,100,000	50	84	221	272	765
HOWITZER, MEDIUM TOWED, 155MM, M198	K57821	\$1,032,337	262	262	262	262	134
<b>BRIDGING EQUIPMENT</b>							
BOAT CRADLE, IMPROVED (IBC), M14	C33925	\$22,064	79	79	79	79	140
BOAT BRIDGE ERECTION, MK1/MK2	B25476	\$210,000	96	108	108	108	144
BRIDGE ERECTION SET, FIXED BRIDGE, 97CLEO40	C22058	\$43,944	10	10	10	10	110
BRIDGE ERECTION SET, FIXED BRIDGE, 97CLE53	C22126	\$488,354	7	7	7	7	11
BRIDGE ERECTION SET, FIXED BRIDGE, 97CLE52	C22811	\$964,515	15	15	15	15	21
BRIDGE, FIXED HIGHWAY, MILB11844	C23017	\$303,673	9	9	9	9	109
BRIDGE HEAVY DRY, SUPT (HDSB) 40M MLC96	B26007	\$2,676,000	4	8	16	20	20
REINFORCEMENT SET, MEDIUM GIRDER BRIDGE	C27309	\$498,940	7	7	7	7	10
LAUNCHER, M60 TANK CHASSIS, AVLB	L43664	\$527,126	218	218	218	218	100
LAUNCHER, HVY DRY SUPPORT BRIDGE	L67660	\$937,000	4	8	16	16	16
INTERIOR BAY BRIDGE, FLOATING	K97376	\$62,910	255	315	345	345	304
PALLET, BRIDGE ADAPTER (BAP) M15	P78313	\$37,085	256	256	256	256	420
RAMP BAY BRIDGE FLOATING	R10527	\$70,575	98	98	98	98	122
<b>COMMUNICATIONS &amp; ELECTRONICS EQUIPMENT</b>							
COMPUTER SET, OL-582/TYQ	C18446	\$5,000	3,121	4,086	6,652	6,652	4,510
COMPUTER SET, OL-584/TYQ	C18582	\$6,000	344	346	346	346	576
COMPUTER SET, OL-590/TYQ (SAMS 1 CONFIG)	C28078	\$19,571	592	598	632	634	1,284
COMPUTER SET, OL-591/TYQ	C18718	\$8,226	184	184	195	195	481
COMPUTER SET, OL-603/TYQ	C78827	\$14,899	148	148	148	148	250
COMPUTER SET, OL-604/TYQ	C18684	\$14,899	262	262	262	262	514
COMPUTER SET, AN/UJK-128	C18378	\$15,954	1,954	8,328	8,548	8,551	41,806
COMPUTER SYSTEM, AN/PYQ-10(C)	Z00384	\$1,973	1,791	1,791	3,467	4,967	84,878
COMPUTER SYSTEM, AN/TYQ-105(V)1	C27503	\$900	4,471	4,471	4,471	4,471	6,271
COMPUTER SYSTEM, AN/TYQ-109(V)1	C27707	\$5,000	5,030	5,032	5,032	5,032	1,551
COMPUTER SYSTEM, AN/TYQ-109(V)2	C27775	\$7,000	997	997	997	1,000	3,470
COMPUTER SYSTEM, AN/TYQ-129(V)1	C27367	\$9,999	29	29	29	29	182
COMPUTER SYSTEM, AN/TYQ-129(V)2	C27435	\$46,287	440	445	445	449	2,071
COMPUTER SYSTEM, AN/UJK-90(V)2	C18278	\$5,650	1,916	4,076	6,723	8,377	10,807
COMPUTER SYSTEM, AN/UJK-90(V)3	C78851	\$8,500	296	296	405	488	1,175
CENTRAL COMMUNICATIONS, AN/TSQ-190(V)3	C89935	\$1,500,000	8	20	34	41	43
DIGITAL TOPOGRAPHIC SYSTEM, AN/TYQ-67(V)	D10281	\$2,500,000	9	23	36	37	75
NAVIGATION SET, SATELLITE SIGNALS AN/PSN-13	N96248	\$2,822	12,297	20,974	21,696	44,104	61,693
NAVSTAR GPS AVIATION SET, MIL-STD-1553	Z46545	TBD	0	0	0	0	36
NAVSTAR GPS AVIATION SET, AN/ASN-128 DOPPLER	Z46320	TBD	0	0	0	0	260
SATELLITE COMM TERMINAL, AN/TSC-85A	S78466	\$1,201,740	10	18	18	18	8
SATELLITE COMM TERMINAL, AN/TSC-93A	S34963	\$600,870	11	25	25	25	12
SATELLITE COMM TERMINAL, AN/TSC-154	T81733	\$825,000	56	89	89	89	113
RADAR SET, SENTINEL AN/MPQ-64	G92997	\$2,256,480	35	52	53	53	56

## Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
RADAR SET, AN/TPQ-36(V)8	R14284	\$7,977,850	24	28	28	28	28
RADAR SET, AN/TPQ-37(V)1	A41666	\$5,400,000	2	8	8	8	16
SM EXTEN NODE SWITCH, AN/TTC-48C(V)1	S25004	\$700,000	201	201	201	201	0
CONTROL RECEIVER TRANSMITTER, C-11561(C)/U	C05541	\$6,476	524	524	524	524	14,542
RADIO SET, SINCGARS AN/VRC-87A	R67160	\$12,109	1,225	1,225	1,225	1,225	0
RADIO SET, SINCGARS AN/VRC-87D	R67228	\$14,825	807	807	807	807	0
RADIO SET, SINCGARS AN/VRC-87F(C)	R67296	\$6,532	824	824	824	824	979
RADIO SET, SINCGARS AN/VRC-88A	R67194	\$12,519	2,756	2,756	2,756	2,756	192
RADIO SET, SINCGARS AN/VRC-88F(C)	R67330	\$7,123	1,963	1,972	2,482	2,482	3,034
RADIO SET, SINCGARS AN/VRC-88D	R67262	\$15,145	737	737	737	737	1
RADIO SET, SINCGARS AN/VRC-89A	R44863	\$22,822	2,675	2,675	2,675	2,675	0
RADIO SET, SINCGARS AN/VRC-89D	R44931	\$12,000	890	890	892	892	240
RADIO SET, SINCGARS AN/VRC-89F(C)	R44999	\$11,128	2,546	2,577	3,087	3,087	4,936
RADIO SET, SINCGARS AN/VRC-90A	R67908	\$13,178	10,231	10,231	10,231	10,231	0
RADIO SET, SINCGARS AN/VRC-90D	R67976	\$12,000	2,855	2,855	2,855	2,855	1,856
RADIO SET, SINCGARS AN/VRC-92F(C)	R45543	\$13,446	7,674	7,846	8,356	8,358	15,492
RADIO SET, SINCGARS AN/VRC-90F(C)	R68044	\$7,415	14,260	14,260	15,280	15,307	43,302
RADIO SET, SINCGARS AN/VRC-91A	R68010	\$23,249	4,150	4,150	4,150	4,150	0
RADIO SET, SINCGARS AN/VRC 91F(C)	R68146	\$11,817	5,073	5,178	5,688	5,688	7,385
RADIO SET, SINCGARS AN/VRC-91D	R68078	\$14,000	852	852	854	867	3,968
RADIO SET, SINCGARS AN/VRC-92A	R45407	\$21,238	2,489	2,489	2,489	2,489	0
RADIO SET, SINCGARS AN/VRC-92D	R45475	\$16,000	1,650	1,650	1,651	1,651	337
RADIO SET, SINCGARS AN/VRC-119A	R83005	\$10,117	2,827	2,827	2,827	2,827	0
RADIO SET, SINCGARS AN/PRC-119D	R83073	\$14,000	548	548	548	548	3
RADIO SET, SINCGARS AN/PRC-119F(C)	R83141	\$4,346	5,897	6,359	6,869	6,869	11,413
RADIO ACCESS UNIT, AN/TRC-191	R33351	\$1,184,275	128	128	128	128	0
RADIO SET, AN/GRC-213	R30895	\$20,000	173	444	444	444	190
RADIO SET, AN/PRC-104A	R55200	\$12,500	419	419	419	419	0
RADIO SET, AN/PRC-126	R55336	\$1,997	5,841	5,841	5,841	5,841	22,489
RADIO SET, AN/PRC-148(V)2 (C) URBAN VERSION	Z99966	\$4,679	5,122	6,575	6,601	6,601	2,060
RADIO SET, AN/PSC-11	R57810	\$150,000	75	78	100	100	116
RADIO SET, AN/PSC-5	R57606	\$27,000	664	1,194	1,625	1,648	1,860
RADIO SET, HF, AN/ARC-220 (V)1	R22436	\$27,779	624	624	624	628	985
RADIO SET, HF, AN/GRC-193A	H35404	\$37,000	398	398	398	398	2,343
RADIO SET, HF MANPACK, AN/PRC-150C (COT/NDI)	Z00873	\$29,753	421	1,131	1,606	1,818	3,675
RADIO SYSTEM, EPLRS	P49587	\$50,011	959	959	961	969	5,901
RADIO TERMINAL, AN/TRC-190(V)1	L69306	\$276,750	350	350	350	350	96
RADIO TERMINAL, AN/TRC-190(V)3	L69442	\$500,805	249	249	249	249	66
RADIO TERMINAL, TELEPHONE, AN/VRC-97	T55957	\$110,000	2,272	2,272	2,272	2,275	981
RADIO TEST SET, AN/PRM-34()	R93169	\$932	2,415	2,415	2,415	2,419	4,722
RECEIVER TRANSMITTER, SINCGARS RT-1523E(C)/U	R30343	\$8,330	24,511	24,511	24,511	24,511	32
RECEIVER TRANSMITTER, SINCGARS RT-1523(C)/U	R31609	\$9,331	29,442	29,442	29,442	29,442	132
RECEIVER TRANSMITTER, SINCGARS RT-1523C(C)/U	R70839	\$8,908	15,559	15,559	15,559	15,559	0
RECEIVER TRANSMITTER, RT-1539(P)A(C)/G	R30434	\$99,212	1,134	1,134	1,134	1,134	0
BN CMD POST (SWITCHING GROUP), OM XXX	Z00564	\$1,200,000	32	74	80	116	194
ACCESSORY KIT, ELECTRONICS EQUIP, MK-2975	Z00057	\$5,500	33	35	35	35	328
AIR DEFENSE SYS INTEGRATOR, AN/MSQ-214(V)1	Z03104	\$5,000,000	3	15	15	15	15

## Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
INTERFACE UNIT COMMUNICATIONS EQUIPMENT, OL-713(V)1/TYQ CSS VSAT	Z00560	\$75,000	180	222	222	222	700
INTERROGATOR SET, AN/TYX-1	J99233	\$3,843	37	37	37	38	589
JNN CENTRAL OFFICE TELEPHONE, AN/TTC-59	Z00562	\$4,200,000	4	19	21	33	128
CENTRAL OFFICE TELEPHONE, AN/TTC-58	C20549	\$2,839,000	0	0	0	0	12
PROCESSOR GROUP SIGNAL DATA, OL-700/TYQ	Z00056	\$900	510	536	536	538	2,486
PROCESSOR GROUP SIGNAL DATA, OL-701/TYQ	Z53098	\$3,200	277	303	303	308	1,868
SIGNAL GENERATOR, SG-1219/U	S48255	\$39,335	67	71	71	71	201
SOFTACS, TRIBAND TACTICAL TERMINAL	Z12507	TBD	4	4	4	4	8
SPECTRUM ANALYZER, AN/USM-489(V)1	S01416	\$37,378	78	78	78	78	318
TARGET ACQ SUBSYSTEM, AN/TSQ-179(V)2	T37036	\$5,000,000	8	8	9	10	37
TROJAN SPIRIT LITE, AN/TSQ-226(V)2	C43331	\$1,275,000	2	2	2	2	2
TROJAN SPIRIT LITE, AN/TSQ-226(V)3	C43399	\$1,880,000	1	1	1	1	1
<b>ENGINEER &amp; CONSTRUCTION VEHICLES</b>							
CRANE, WHL-MTD, 25-TON, ATEC AT422T	C36586	\$226,341	172	172	172	172	51
TRUCK CONCRETE, MOBILE MIXER 8 CU YD (CCE)	T42725	\$132,518	26	26	26	26	40
COMPACTOR, HIGH SPEED	E61618	\$135,186	108	108	108	108	102
TRACTOR, WHLD EXCAVATOR, SEE	T34437	\$110,000	682	685	685	687	634
TRACTOR, FT, HVY, CAT D8K-8-S	W88699	\$197,322	69	69	69	69	6
TRUCK, FORKLIFT, DED 50K LB, RT, CONT HDLR	T48941	\$159,138	18	18	18	18	68
TRUCK, FORKLIFT, DED 6K LB, RT, AMMO HDLG	T48944	\$72,370	501	501	501	501	45
TRUCK, FORKLIFT, DED 4K LB, ROUGH TERRAIN	T49255	\$47,692	359	359	359	359	112
TRUCK, FORKLIFT, ATLAS	T73347	\$100,199	199	285	331	361	579
TRACTOR FULL-TRACKED HIGH-SPEED, DEUCE	T76541	\$362,687	50	50	50	53	45
TRACTOR, FULL-TRACKED, ARMORED, M9 (ACE)	W76473	\$887,050	62	62	62	62	90
TRACTOR, FT, MED, CAT D7 W/SCARIF WINCH	W76816	\$205,000	642	642	642	642	383
TRACTOR, FT, MED, CAT D7 W/SCARIF RIPPER	W83529	\$245,275	346	346	346	346	303
TRUCK, DUMP, 20-TON, M917	X44403	\$191,616	522	522	522	522	548
GRADER ROAD MOTORIZED, DED HVY	G74783	\$67,724	523	523	529	529	533
GRADER ROAD MOTORIZED, DED SECTIONALIZED	J74886	\$223,471	14	14	14	14	86
EXCAVATOR, HYDRAULIC (HYEX) TYPE I	E27792	\$164,350	74	75	75	75	101
EXCAVATOR, HYDRAULIC (HYEX) TYPE II	E41791	\$435,755	16	16	16	16	9
EXCAVATOR, HIGH MOBILITY ENGINEER (HMEE)	Z99110	\$267,301	0	0	0	0	6
LOADER SCOOP TYPE, DED W/5 CY GP BUCKET	L76321	\$75,450	91	94	94	94	124
LOADER SCOOP TYPE, DED W/MULTI PURP BUCKET	L76556	\$58,890	410	419	419	419	417
ROUGH TERRAIN CONTAINER HANDLER, RT240	R16611	\$460,077	0	27	31	31	1
SCRAPER ELEVATING, SP NON-SECTIONALIZED	S29971	\$162,596	0	0	0	2	42
SCRAPER ELEVATING, SP SECTIONALIZED	S30039	\$324,218	21	21	21	21	0
SCRAPER EARTH MOVING SP, 14-18 CU YD	S56246	\$120,410	441	441	441	441	402
<b>GENERATOR SETS &amp; POWER PLANTS</b>							
GENERATOR SET, 10KW, PU-753/M	G40744	\$12,102	742	742	742	742	22
GENERATOR SET, 5KW, PU-797 TQG	G42238	\$20,000	602	623	640	641	829
GENERATOR SET, 10KW, PU-798 TQG	G42170	\$13,000	823	935	967	973	1,523
GENERATOR SET, 15KW, PU-801/A TQG	G78374	\$25,000	49	84	129	129	176
GENERATOR SET, 15KW, PU-802 TQG	G53778	\$19,080	296	296	323	324	1,503
GENERATOR SET, 30KW, PU-803/B/G	G35851	\$28,521	191	209	223	223	657
GENERATOR SET, 60KW, PU-805 TQG	G78306	\$31,596	102	124	153	153	306
GENERATOR SET, 5KW, MEP-002A	J35813	\$8,332	2,942	2,942	2,942	2,942	728

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GENERATOR SET, 10KW, MEP-003A	J35825	\$13,635	1,375	1,375	1,375	1,375	239
GENERATOR SET, 3KW, MEP-016B	G54041	\$6,459	0	0	0	0	1,309
GENERATOR SET, 2KW, MEP-501A	G36237	\$6,000	2,224	2,224	2,863	2,863	4,745
GENERATOR SET, 2KW, MEP-531A	G36169	\$6,000	19	19	293	293	503
GENERATOR SET, 5KW, MEP-802A TQG	G11966	\$12,798	1,166	1,426	1,838	1,838	2,429
GENERATOR SET, 10KW, MEP-803A TQG	G74711	\$14,345	524	679	886	886	1,256
GENERATOR SET, 60KW, MEP-805A/B TQG	G74575	\$26,705	70	72	72	72	267
GENERATOR SET, 3KW, MEP-831A TQG	G18358	\$9,922	2,292	2,292	2,636	2,867	8,025
POWER PLANT, 10KW, AN/MJQ-18	P28015	\$36,050	166	166	166	166	40
POWER PLANT, 10KW, AN/MJQ-37 TQG	P42262	\$36,558	146	152	158	161	291
POWER PLANT, 30KW, AN/MJQ-40 TQG	P42126	\$63,941	72	102	143	149	167
<b>MEDICAL EQUIPMENT</b>							
DENTAL EQUIP SET, COMPREHENSIVE DENT FIELD	D43802	\$52,845	27	30	33	33	57
DEFIBRILLATOR MONITOR RECORDER	D86072	\$31,885	351	357	387	389	377
MEDICAL EQUIP SET, AIR AMBULANCE	M29213	\$27,922	256	256	256	256	246
MEDICAL EQUIP SET, CHEM AGENT PATIENT TREAT	M23673	\$27,292	680	710	757	757	855
MEDICAL EQUIP SET, GROUND AMBULANCE	M26413	\$20,500	1,794	1,869	1,945	1,945	1,774
MEDICAL EQUIP SET, PATIENT HOLDING FIELD	M29633	\$116,923	136	139	142	142	105
MEDICAL EQUIP SET, SICK CALL FIELD (2)	M30156	\$15,000	847	874	914	914	894
MEDICAL EQUIP SET, SPECIAL FORCES, TACTICAL	M29999	\$29,350	233	233	233	233	141
MEDICAL EQUIP SET, TRAUMA FIELD (2)	M30499	\$45,000	863	890	936	936	892
SURGICAL INSTRUMENT & SUPPLY SET, INDIVIDUAL	U65480	\$3,000	2,673	2,835	3,015	3,015	4,956
VENTILATOR, VOLUME, PORTABLE	V99788	\$9,703	256	258	261	273	423
<b>NBC DEFENSIVE EQUIPMENT</b>							
CHEMICAL AGENT ALARM, M8A1	A32355	\$8,432	12,460	12,492	12,492	12,492	1,859
CHEMICAL AGENT ALARM, M22	A33020	\$10,000	6,760	11,145	15,306	15,306	17,591
BIOLOGICAL AGENT ALARM, (BIDS) M31E2	Z04905	\$1,118,000	0	70	77	77	84
CHEMICAL AGENT MONITOR, IMPROVED (ICAM)	C05701	\$7,500	5,447	8,054	11,158	11,212	10,519
MASK, CHEMICAL BIOLOGICAL, M40	M12418	\$202	313,493	313,595	319,685	320,259	146,976
MASK, PROTECTIVE, COMBAT VEHICLE, M42	M18526	\$640	35,993	35,993	36,008	36,008	999
MASK, CHEMICAL BIOLOGICAL, JSGPM	Z00036	\$181	0	0	0	0	181,507
MASK, CHEMICAL BIOLOGICAL, JSGPM CBT VEH	Z00029	\$293	0	0	0	0	26,096
CHEM-BIO PROTECTIVE SHELTER (CBPS)	C07506	\$622,051	0	0	0	0	314
SIMPLIFIED COLLECTIVE PROTECTION EQUIP, M20	C79000	\$18,391	305	305	305	309	1,908
DECONTAMINATING APPARATUS, M17	D82404	\$23,121	153	411	473	477	1,389
RADIAC SET, AN/VDR-2	R20684	\$1,950	17,088	18,799	21,057	21,057	19,647
RADIAC SET, AN/PDR-75	R30925	\$2,978	1,292	1,496	1,768	1,769	3,469
RADIAC SET, AN/PDR-77	R30993	\$4,312	678	897	900	900	1,149
RADIAC SET, AN/UDR-13	R31061	\$631	6,728	21,621	30,980	30,980	29,299
NBC RECONNAISSANCE SYSTEM, M93A1 FOX	R41282	\$2,000,000	5	12	12	12	14
<b>NIGHT-VISION EQUIPMENT</b>							
AVIATION NIGHT-VISION SYSTEM (ANVIS), AN/AVS-6	A06352	\$10,747	4,890	4,898	4,939	4,939	4,669
DRIVER VISION ENHANCER, AN/VAS-5	D41659	\$7,473	96	460	806	1,782	25,908
LASER IR OBSERVATION SET, AN/GVS-5	L40063	\$4,879	1,034	1,034	1,034	1,034	7
LASER IR OBSERVATION SET (MELIOS), AN/PVS-6	M74849	\$22,015	1,391	1,391	1,391	1,391	10,791
MONOCULAR NIGHT-VISION DEVICE, AN/PVS-14	M79678	\$3,607	46,396	87,314	157,482	159,672	41,888
NIGHT-VISION SIGHT, AN/PVS-4 W/IMG	N04732	\$8,535	23,464	23,464	23,503	23,503	501
NIGHT-VISION GOGGLES, AN/PVS-5	N04456	\$4,300	31,359	31,359	31,359	31,359	0

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NIGHT-VISION SIGHT, CREW SERV WPN, AN/TVS-5	N04596	\$3,500	3,042	3,042	3,278	3,332	10,916
NIGHT-VISION GOGGLES, AN/PVS-7B	N05482	\$3,578	59,052	59,052	60,805	60,805	185,770
NIGHT-VISION SIGHT, SNIPER, AN/PVS-10	S90433	\$9,546	468	546	546	546	501
NIGHT-VISION SIGHT, AN/UAS-11(V)1	N05050	\$68,000	18	18	21	21	390
NIGHT-VISION SIGHT, AN/UAS-12	N04982	\$116,014	942	942	942	942	0
THERMAL WEAPON SIGHT, AN/PAS-13	S90535	\$17,591	2,241	5,327	12,445	14,539	19,110
THERMAL WEAPON SIGHT, AN/PAS-13A	S90603	\$19,306	1,885	5,018	11,483	20,099	20,183
THERMAL WEAPON SIGHT, AN/PAS-13B(V)1	S60356	\$12,512	1,082	3,608	12,076	14,076	26,365
REFLEX SIGHT, COLLIMATOR, M68	S60288	\$400	122,701	122,741	122,741	122,741	110,276
INFRARED ILLUMINATOR, AN/PEQ-2	J03261	\$1,000	21,934	25,266	25,651	25,776	30,265
LASER DESIGNATOR RANGEFINDER, AN/PED-1	R60282	\$300,000	41	127	266	432	1,083
LONG RNG ADV SCOUT SURVEILL SYS, AN/TAS-8	S02976	\$400,000	174	270	558	605	626
<b>OTHER SUPPORT EQUIPMENT</b>							
BOAT, LANDING CRAFT, INFLATABLE 7 PERSON	B84293	\$10,685	110	146	191	191	303
CAMOUFLAGE NET SYSTEM, AN/USQ-159	C89480	\$1,256	34,186	34,186	34,186	34,431	221,383
CAMOUFLAGE SCREEN SUPPORT SYSTEM	C89070	\$359	231,971	245,013	253,793	256,945	73,181
CAMOUFLAGE SCREEN SYS, W/O SUPPORT SYS	C89145	\$966	218,733	232,491	242,383	245,834	74,396
FIRE FIGHTING EQUIPMENT SET, TRUCK-MTD	H56391	\$151,000	26	26	26	26	36
FOOD SANITATION CENTER	S33399	\$33,865	295	414	548	606	1,046
KITCHEN, CONTAINERIZED, CK	C27633	\$100,532	71	74	107	120	285
KITCHEN, FIELD, MTD ON M103A3 TLR	L28351	\$78,860	1,629	1,629	1,629	1,629	838
KITCHEN, COMPANY LEVEL, FIELD FEEDING	K28601	\$7,511	292	292	292	295	1,121
RIOT CONTROL AGENT DISPERSER, M33	G22348	\$724	673	673	673	673	2,983
RIOT CONTROL AGENT DISPERSER, SVC KIT, M254	S78839	\$1,498	453	464	466	466	2,494
SHELTER, RIGID WALL, COMMAND POST	R98145	\$140,000	7	7	7	7	1,826
SHELTER, TACTICAL EXPANDABLE TWOSIDE	S01359	\$223,219	15	15	15	15	90
TELESCOPE, STRAIGHT, M145	T60185	\$643	11,574	11,582	11,586	11,586	5,487
TENT, LTWT MAINTENANCE ENCLOSURE (LME)	T49947	\$14,406	1,609	1,844	1,870	1,941	1,265
TENT, FRAME TYPE MAINT MEDIUM LIGHT METAL	V48441	\$13,065	912	933	936	952	674
<b>REPAIR &amp; TEST EQUIPMENT</b>							
ELECTRONIC SHOP AVIONICS, AN/ASM-146	H01907	\$124,000	255	255	255	256	910
SHOP EQUIP, CONTACT MAINT ORD/ENG TRK-MTD	S25681	\$72,357	413	561	1,056	1,375	2,384
SHOP EQUIPMENT AUTO MAINT & REPAIR	T24660	\$120,827	194	194	194	194	673
TEST KIT MASK PROTECTIVE, M41	T62350	\$7,000	2,783	2,787	2,787	2,787	2,550
TEST SET, DIAGNOSTIC	D12196	\$9,672	57	58	58	58	402
TEST SET, AVIATOR NIGHT VIS IMAG SYS, TS-3895	T53471	\$10,424	324	324	324	324	624
TEST SET, ELECT SYS DIRECT SUPPORT (DESETS)	T52849	\$561,312	101	101	101	101	152
TEST SET, RADIO, AN/GRM-114	T87468	\$11,822	569	569	569	569	533
TEST SET, STABILATOR LINE/SAS	T93517	\$42,847	223	227	229	229	167
TEST SET, TRANSPONDER, AN/APM-421	T49392	\$30,370	39	39	39	39	170
TEST SET, ELECT SYS AN/PSM-95	T92889	\$12,990	3,540	4,515	5,546	5,578	11,151
TEST SET, RADAR TS-4530()/JPM	T99847	\$9,944	297	297	312	312	486
TEST SET, ELECTRONIC, TS-4348/UV	E03826	\$256	2,392	2,392	2,392	2,407	8,064
TOOL KIT ELECTRIC EQUIPMENT, TK-101/GSQ	W37483	\$1,121	5,427	5,430	5,431	5,431	4,596
<b>TACTICAL &amp; SUPPORT VEHICLES</b>							
ARMORED SECURITY VEHICLE (ASV), M1117	A93374	\$809,500	0	198	210	210	0
FIRE SUPPORT VEHICLE, KNIGHT, M707	S50205	\$947,000	29	54	114	114	111
FORWARD REPAIR SYSTEM (FRS)	F64544	\$270,561	60	216	219	219	209

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HMMWV TOW CARRIER, M966	T05096	\$49,521	703	703	703	703	368
HMMWV AMBULANCE, 2-LITTER, M996	T38707	\$49,357	41	41	41	41	9
HMMWV AMBULANCE, 4-LITTER, M997	T38844	\$113,998	1,036	1,042	1,042	1,042	1,657
HMMWV CGO/TRP CARRIER, M998	T61494	\$36,076	15,568	15,568	15,568	15,568	29,634
HMMWV ARMT CARRIER, ARMD, M1025	T92242	\$74,969	2,246	2,246	2,246	2,246	1,216
HMMWV ARMT CARRIER, ARMD, M1026 W/W	T92310	\$39,518	1,166	1,166	1,166	1,166	494
HMMWV SHELTER CARRIER, M1037	T07543	\$36,932	1,706	1,706	1,706	1,706	270
HMMWV SHELTER CARRIER, M1037 W/AOA	T61242	\$53,751	1	1	1	1	0
HMMWV CGO/TRP CARRIER, W/W, M1038	T61562	\$36,672	1,115	1,115	1,115	1,115	452
HMMWV CGO/TRP CARRIER, W/W, M1038 W/AOA	T11790	\$56,251	10	10	10	10	0
HMMWV SHELTER CARRIER, HEAVY, M1097	T07679	\$61,665	5,297	7,064	7,797	7,797	3,786
HMMWV TRUCK, UTILITY, ECV, M1113	T61630	\$61,042	454	454	454	460	4,871
HMMWV TRUCK, UTILITY, ECV, UP-ARMORED, M1114	T92446	\$146,844	345	402	402	402	4,787
HMMWV ARMT CARRIER, ECV, M1151	T34704	\$75,969	61	261	1,063	1,063	1,038
HMMWV ARMT CARRIER, ECV, M1151 W/AOA	T92514	\$95,548	15	15	15	15	0
HMMWV CGO/TRP CARRIER, ECV, M1152A1	Z01013	\$146,000	7	467	467	467	0
HMMWV TRUCK, COMMAND & CONTROL, M1165A1	Z00958	\$107,000	0	2,285	2,285	2,285	0
LMTV 2.5-TON CARGO TRUCK, M1078	T60081	\$176,428	2,732	4,136	4,251	4,678	9,023
LMTV 2.5-TON CARGO TRUCK, M1078 W/W	T60149	\$115,639	311	527	537	607	1,086
LMTV 2.5-TON CARGO TRUCK, M1079	T93484	\$162,060	96	118	228	273	909
LMTV 2.5-TON CARGO TRUCK, W/ LAPES/AD, M1081	T41995	\$101,742	0	0	0	0	85
M35-SERIES 2.5 TON TRUCK, CARGO, M35A2	X40009	\$56,500	6,116	6,116	6,116	6,116	0
M35-SERIES 2.5 TON TRUCK, CARGO, M35A2 W/W	X40146	\$56,500	2,394	2,394	2,394	2,394	0
MTV 5-TON CARGO TRUCK, M1083	T61908	\$128,076	1,632	3,098	3,157	3,373	8,725
MTV 5-TON CARGO TRUCK, M1083 W/W	T41135	\$134,047	268	440	480	490	872
MTV 5-TON CARGO TRUCK, M1084	T41203	\$218,378	279	308	398	483	1,227
MTV 5-TON CARGO TRUCK, M1085	T61704	\$118,791	51	72	81	95	521
MTV 5-TON CARGO TRUCK, M1085 W/W	T61772	\$110,922	10	24	24	24	66
MTV 5-TON CARGO TRUCK, W/W, W/MHE, M1086	T61840	\$209,309	33	33	38	38	0
MTV 5-TON TRUCK VAN, EXPANSIBLE, M1087	Z94560	\$386,343	0	96	141	169	572
MTV 5-TON TRACTOR TRUCK, M1088	T61239	\$142,132	1,109	1,484	1,560	1,650	4,662
MTV 5-TON TRACTOR TRUCK, M1088 W/W	T61307	\$128,767	70	98	98	101	536
MTV 5-TON WRECKER, M1089	T94709	\$331,680	145	348	351	354	969
MTV 5-TON DUMP TRUCK, M1090	T64911	\$141,557	31	31	31	31	1,467
MTV 5-TON DUMP TRUCK, M1090 W/W	T64979	\$139,015	1	1	1	1	341
MTV 5-TON CARGO TRUCK, W/ LAPES/AD, M1093	T41036	\$118,579	55	55	59	59	39
MTV 5-TON CARGO TRUCK, W/ LAPES/AD, M1093 W/W	T41104	\$119,265	4	11	11	11	18
MTV 5-TON DUMP TRUCK, W/ LAPES/AD, M1094	T65526	\$129,535	41	41	41	41	4
M809/M939-SERIES 5-TON CARGO TRUCK, M813/M923	X40794	\$74,450	4,706	4,706	4,706	4,706	0
M809/M939-SERIES 5-TON CARGO TRUCK, M813/M925	X40931	\$85,946	1,359	1,359	1,359	1,359	0
M809/M939-SERIES 5-TON DUMP TRUCK, M817/M929	X43708	\$89,115	1,452	1,452	1,453	1,453	0
M809/M939-SERIES 5-TON TRUCK VAN, M820/M934	X62237	\$145,700	405	405	405	405	784
M809/M939-SERIES 5-TON WRECKER, M816/M936	X63299	\$168,960	1,121	1,121	1,121	1,121	0
HEMTT CARGO TRUCK, W/LT CRANE, M977	T59278	\$251,388	573	573	573	573	183
HEMTT CARGO TRUCK, W/LT CRANE, M977 W/W	T39518	\$260,574	170	170	170	170	554
HEMTT CARGO TRUCK, W/MED CRANE, M985	T39586	\$272,033	847	847	847	849	250
HEMTT CARGO TRUCK, W/MED CRANE, M985 W/W	T39654	\$282,002	169	169	169	169	550
HEMTT CARGO TRUCK, GMT, M985E1 W/W	T41721	\$307,359	5	5	5	5	0

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HEMTT CARGO TRUCK, W/LHS, M1120	T96496	\$226,800	321	731	1,364	2,228	2,334
HEMTT CARGO TRUCK, W/LHS, M1120 W/AOA	T82378	\$276,800	22	22	22	22	0
HEMTT FUEL TANKER, 2500GAL, M978	T87243	\$268,440	870	1,161	1,369	1,701	2,454
HEMTT FUEL TANKER, 2500GAL, M978 W/W	T58161	\$278,409	480	670	685	685	1,405
HEMTT COMMON BRIDGE TRANSPORTER, M1977	T91308	\$226,150	384	403	403	403	564
HEMTT TACTICAL FIREFIGHTING TRUCK, M1142	T82180	\$640,131	33	35	35	35	36
HEMTT WRECKER, M984	T63093	\$379,000	602	892	947	974	809
TRUCK TRACTOR, 5-TON, M931	X59326	\$86,203	3,118	3,118	3,118	3,118	0
TRUCK TRACTOR, 14-TON LINE HAUL, M915	T61103	\$162,968	2,606	2,786	2,786	2,786	2,322
TRUCK TRACTOR, 14-TON LET, M916	T91656	\$164,760	815	920	920	938	1,614
TRUCK TRACTOR, 20-TON MET, M920	T61171	\$74,288	302	302	302	302	0
TRUCK TRACTOR, HETS, M1070	T59048	\$256,704	577	577	577	679	744
PLS CONTAINER HANDLING UNIT (CHU)	C84862	\$10,564	160	431	793	793	674
PLS TRANSPORTER, M1074	T41067	\$288,015	597	597	597	597	221
PLS TRANSPORTER, M1075	T40999	\$276,410	626	998	1,170	1,170	1,157
PLS TRAILER, 16.5 TON, M1076	T93761	\$46,731	1,331	3,046	3,721	4,003	3,579
PLS DEMOUNTABLE CARGO BED	B83002	\$16,633	3,423	7,789	11,377	12,635	15,705
TRUCK, CARRYALL, 1/4 TO 1 1/4 TON	X42201	\$28,000	918	918	918	918	4,778
TRUCK, CARGO, 1/2 TO 1 TON, 4X4	X39893	\$27,242	1,980	1,980	1,980	1,980	6,974
TRUCK, CARGO, 1/2 TO 3/4 TON, 4X2	X39598	\$18,000	83	83	83	83	6,015
AUTOMOBILE SEDAN, CLASS II COMPACT	B04441	\$9,176	253	253	253	253	8,953
BUS, MOTOR, 28-44 PASSENGER	C39977	\$62,106	24	24	24	24	1,286
SEMITRAILER VAN, 6-TON, ELECTR SHOP, M146	S75038	\$6,532	350	350	350	350	587
SEMITRAILER VAN, 6-TON REPAIR PARTS, M749/M750	S74832	\$32,952	174	175	176	176	177
SEMITRAILER TANKER, 5000-GAL BULK HAUL, M967	S10059	\$77,550	339	340	340	340	241
SEMITRAILER TANKER, 5000-GAL POL, M969	S73372	\$97,413	451	569	604	604	179
SEMITRAILER, 22.5-TON FLATBED, M871	S70027	\$26,500	4,195	4,236	4,236	4,236	3,672
SEMITRAILER, 34-TON FLATBED, M872	S70159	\$43,252	2,329	2,463	2,580	2,580	4,323
SEMITRAILER, 40-TON LOWBED, M870	S70594	\$51,900	962	1,035	1,035	1,035	1,835
SEMITRAILER, 70 TON LOWBED, M1000 HETS	S70859	\$229,219	569	569	569	684	800
TRAILER, CARGO, 3/4-TON, M101	W95537	\$4,474	5,238	5,242	5,242	5,254	2,173
TRAILER, CARGO, 3/4-TON, HIGH MOBILITY, M1101	T95992	\$8,954	780	1,688	2,438	3,039	12,810
TRAILER, CARGO, 5/4-TON, HIGH MOBILITY, M1102	T95924	\$8,954	504	1,292	1,533	1,613	2,565
TRAILER, CARGO, 1.5-TON, M105	W95811	\$8,524	8,479	8,479	8,502	8,529	1,451
TRAILER, CARGO, 2.5 TON LMTV, M1082	T96564	\$34,569	977	1,949	1,949	1,951	5,352
TRAILER, CARGO, 5-TON MTV, M1095	T95555	\$62,829	412	532	532	540	4,910
TRAILER, HEMAT, 11-TON, M989A1	T45465	\$34,714	1,059	1,260	1,260	1,260	1,607
<b>TRACKED &amp; OTHER COMBAT VEHICLES</b>							
CARRIER, AMMO TRACKED, M992A2	C10908	\$1,140,667	308	308	308	308	282
CARRIER 120MM MORTAR, SP ARMORED	C10990	\$318,308	399	453	453	455	112
CARRIER ARMORED COMMAND POST	C11158	\$374,086	161	270	270	270	355
ARMORED PERSONNEL CARRIER, FISTV, M113	C12155	\$553,367	388	388	388	388	0
ARMORED PERSONNEL CARRIER, M113A3	C18234	\$405,815	1,194	1,454	1,454	1,454	1,248
CARRIER, CARGO, M548	D11049	\$323,416	435	435	435	435	32
CARRIER, COMMAND POST, M577A1	D11538	\$345,787	1,302	1,359	1,359	1,359	190
ARMORED PERSONNEL CARRIER, M113A1/A2	D12087	\$244,844	1,635	1,635	1,635	1,635	0
COMBAT VEHICLE, ANTI-TANK, ITV M901A1	E56896	\$393,062	265	265	265	265	19
TANK, COMBAT, 105MM, M1 ABRAMS	T13374	\$1,645,697	429	429	429	429	0

## Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
TANK, COMBAT, 120MM, M1A1 ABRAMS	T13168	\$2,393,439	1,309	1,367	1,367	1,425	0
TANK, COMBAT, 120MM, M1A2 ABRAMS	T13305	\$4,445,399	36	36	36	36	546
BRADLEY FIGHTING VEH, INFANTRY, M2A0	J81750	\$1,061,457	129	129	129	129	0
BRADLEY FIGHTING VEH, INFANTRY, M2A2	F40375	\$1,349,348	403	542	596	596	0
BRADLEY FIGHTING VEH, INFANTRY, M2A2 W/ODS	M31793	\$1,311,639	27	55	83	101	18
BRADLEY FIGHTING VEH, INFANTRY, M2A3	F60564	\$4,409,064	43	80	80	138	527
BRADLEY FIGHTING VEH, CAVALRY, M3A0	C76335	\$1,056,845	58	58	58	58	0
BRADLEY FIGHTING VEH, CAVALRY, M3A2	F60530	\$1,144,000	230	283	287	287	0
BRADLEY FIGHTING VEH, CAVALRY, M3A3	F90796	\$4,021,449	0	23	23	29	263
BRADLEY FIRE SUPPORT TEAM VEH, M7	F86571	\$903,195	22	44	66	74	115
STRYKER INFANTRY CARRIER VEHICLE, M1126	J22626	\$2,320,389	126	129	129	129	128
STRYKER RECONNAISSANCE VEHICLE, M1127	R62673	\$2,320,389	51	51	51	51	51
STRYKER MOBILE GUN SYSTEM VEHICLE, M1128	M57720	\$2,320,389	0	0	0	0	27
STRYKER MORTAR CARRIER VEHICLE, M1129	M53369	\$2,320,389	62	63	63	63	36
STRYKER COMMANDERS VEHICLE, M1130	C41314	\$2,320,389	21	33	33	33	25
STRYKER FIRE SUPPORT VEHICLE, M1131	F86821	\$2,320,389	14	14	14	14	13
STRYKER ENGINEER SQUAD VEHICLE, M1132	J97621	\$2,320,389	14	14	14	14	12
STRYKER MEDICAL EVACUATION VEHICLE, M1133	M30567	\$2,320,389	17	18	18	18	16
STRYKER ANTITANK GUIDED MISSILE VEH, M1134	A83852	\$2,320,389	3	12	12	12	9
STRYKER NBC RECONNAISSANCE VEHICLE, M1135	N96543	\$2,320,389	0	0	0	0	3
RECOVERY VEHICLE, MEDIUM, M88A1	R50681	\$1,210,755	758	758	758	758	409
<b>UNMANNED AERIAL VEHICLE SYSTEMS</b>							
GROUND CONTROL STATION, (TUAV SHADOW)	Z49008	\$1,146,219	8	8	8	12	12
TACTICAL UAV SYSTEM, SHADOW	T09343	\$12,000,500	5	9	16	16	10
VEHICLE, UAV SYSTEM, RAVEN	Z00446	\$168,074	23	23	95	95	330
<b>WATER &amp; PETROLEUM EQUIPMENT</b>							
FORWARD AREA WATER POINT SUPPLY SYSTEM	F42612	\$19,484	120	130	137	187	537
TACTICAL WATER PURIFICATION SYSTEM (TWPS)	T14017	\$450,000	26	34	48	59	115
ROWPU WATER PURIFICATION SYSTEM, 3000 GPH	W47225	\$748,000	73	81	81	81	63
DISTRIBUTOR WATER TANK, 6K GAL TLR-MTD	D28318	\$30,289	87	87	92	92	223
WATER QUALITY ANALYSIS SET, PURIFICATION	W47475	\$3,404	77	77	77	77	392
WATER STORAGE/DISTRIBUTION SET, 40K GPD	W55968	\$121,746	6	6	6	6	60
WATER STORAGE/DISTRIBUTION SET, 800K GAL	W37311	\$200,508	10	10	10	10	15
TACTICAL WATER DISTRIB EQ SET, (TWDS RDF)	T09094	\$660,000	16	16	16	16	7
TRAILER, TANK WATER (CAMEL), 900 GAL	Z36683	\$95,000	0	0	160	224	89
TRAILER, TANK WATER, 400 GAL, M1112	W98825	\$16,000	3,368	3,368	3,368	3,368	3,367
TANK & PUMP UNIT, LIQUID DISPENSING TRK-MTD	V12141	\$9,015	1,323	1,323	1,323	1,323	2
TANK, LIQUID STORAGE	T32629	\$50,000	76	127	146	149	236
HEMTT AVIATION REFUELING SYSTEM (HTARS)	R66273	\$24,460	198	198	198	198	441
HOSELINE OUTFIT FUEL HANDLING, 4 IN DIA HOSE	K54707	\$3,000,000	0	0	7	34	16
FUEL FARM MOBILE MODULAR	Z28886	\$2,000,000	0	0	5	7	39
FUEL SYSTEM SUPPLY POINT, PORTABLE 60K GAL	J04717	\$30,213	30	35	35	40	77
FORWARD AREA REFUELING SYSTEM, AAFARS	F42611	\$321,537	64	87	103	103	109
<b>WEAPONS</b>							
LAUNCHER, GRENADE, 40MM, M203	L44595	\$593	20,054	20,054	20,054	20,054	9,213
LAUNCHER, GRENADE, 40MM, M203A2	L69012	\$1,020	2,747	2,747	2,747	2,747	9,311
LAUNCHER, GRENADE, 40MM, M203A1	L46007	\$593	1,229	1,229	1,273	1,273	6,551
MACHINE GUN, 5.56MM, M249	M09009	\$2,653	26,054	28,840	28,967	28,967	25,291

**ARNG**

Table 1

**Consolidated Major Item Inventory and Requirements**

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Unit Cost</b>	<b>Begin FY 2009 QTY O/H</b>	<b>Begin FY 2010 QTY O/H</b>	<b>Begin FY 2011 QTY O/H</b>	<b>End FY 2011 QTY O/H</b>	<b>End FY 2011 QTY REQ</b>
MACHINE GUN, 5.56MM, M249, LIGHT	M39263	\$2,779	3,600	3,600	3,600	3,600	7,920
MACHINE GUN, GRENADE, 40MM, MK19 MOD III	M92362	\$15,320	8,534	9,563	9,835	9,835	8,744
MACHINE GUN, 7.62MM, M240B	M92841	\$6,000	7,930	10,935	12,546	12,546	14,807
MACHINE GUN, 7.62MM, M240C	M92420	\$4,890	1,232	1,232	1,232	1,232	857
MACHINE GUN, 7.62MM, M240H	M92591	\$7,800	998	998	1,080	1,080	216
MACHINE GUN, 7.62MM, M60	L92386	\$5,864	3,200	3,200	3,200	3,200	0
MACHINE GUN, CAL .50, M2	L91975	\$8,493	11,050	11,462	11,672	11,672	14,867
MACHINE GUN RING MOUNT, CAL .50, M36/M66	M74364	\$4,968	4,219	4,219	4,219	4,234	18,801
MACHINE GUN TRIPOD MOUNT, 7.62MM, M122	M75714	\$619	11,452	11,452	11,457	11,457	5,612
PISTOL, 9MM AUTOMATIC, M9	P98152	\$497	65,383	65,383	65,391	65,391	60,498
RIFLE, 5.56MM, M16A2	R95035	\$449	228,558	228,712	228,713	228,713	188,198
RIFLE, 5.56MM, M16A4	R97175	\$587	26,405	26,411	26,411	26,411	5,457
CARBINE, 5.56MM, M4	R97234	\$587	69,821	86,780	88,275	88,275	118,088
RAIL ADAPTER, WEAPON MOUNTED M4	A20044	\$328	70,013	86,165	99,300	100,482	99,707
RIFLE, 7.62MM, SNIPER M24	R95387	\$5,145	681	681	681	681	2,872
SHOTGUN, 12-GAUGE RIOT TYPE	T39223	\$235	7,645	8,902	9,153	9,196	21,635

## Average Age of Equipment

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

Nomenclature	Equip No.	Average Age	Remarks
<b>FIXED WING AIRCRAFT</b>			
AIRPLANE, CARGO, C-12	2 LINS	17	
AIRPLANE, CARGO, C-23	A29880	10	
AIRPLANE, CARGO, C-26	A46758	10	
AIRPLANE, CARGO, UC-35	Z95382	8	
<b>ROTARY AIRCRAFT</b>			
HELICOPTER, UTILITY UH-60A (BLACKHAWK)	K32293	25	
HELICOPTER, CARGO CH-47D (CHINOOK)	H30517	18	
HELICOPTER, ATTACK AH-64A (APACHE)	H28647	17	
HELICOPTER, OBSERVATION, OH-58D (KIOWA)	A21633	14	
HELICOPTER, UTILITY UH-60L (BLACKHAWK)	H32361	11	
AVIATORS NIGHT VISION IMAGING SYSTEM: AN/AVS-6(V)1	A06352	4	
<b>TRACKED &amp; WHEELED COMBAT SYSTEMS</b>			
HOWITZER, M102, 105MM, LT, TWD	K57392	47	
ARMORED PERSONNEL CARRIER, FM113A1/2	D12087	41	
CARRIER, M106A1, 107MM MORT, 4.2IN	D10741	40	
CARRIER CARGO, FT, 6 TON M548	D11049	38	
HOWITZER, MEDIUM, SP, 155MM M109A5	K57667	37	
CARRIER, SMOKE GENERATOR, FT, ARMD	C12815	35	
ARMORED PERSONNEL CARRIER, FISTV	C12155	35	
RECOVERY VEHICLE, FT, MDM M88A1	R50681	32	
CARRIER, COMMAND POST M577A1	D11538	31	
LAUNCH, M60 TANK CHASSIS	L43664	31	
TANK, COMBAT, 105 MM M1 (ABRAMS)	T13374	23	
CAVALRY FIGHTING VEHICLE M3A0 (BRADLEY)	C76335	23	
INFANTRY FIGHTING VEHICLE M2A0 (BRADLEY)	J81750	23	
CAVALRY FIGHTING VEHICLE M3A2 (BRADLEY)	F60530	20	
TANK, COMBAT, 120MM M1A1 (ABRAMS)	T13168	19	
ARMORED PERSONNEL CARRIER M113A3	C18234	19	
CARRIER, AMMO, TRACKED M992A2	C10908	17	
INFANTRY FIGHTING VEHICLE M2A2 (BRADLEY)	F40375	15	
<b>TRANSPORTATION</b>			
SEMITRAILER LOW BED: 25 TON 4 WHEEL	S70517	40	
SEMITRAILER VAN: SHOP 6 TON 2 WHEEL	S75038	40	
SEMITRAILER LOW BED: WRECKER 12 TON 40 FT	S70243	38	
TRAILER CARGO: 1-1/2 TON 2 WHEEL	W95811	36	
SEMITRAILER VAN: REPAIR PARTS STORAGE 6 TON	S74832	34	
TRAILER CARGO: 3/4 TON 2 WHEEL	W95537	33	
TRUCK TRACTOR: MET 8X6 75000 GVW W/W C/S	T61171	27	
SEMITRAILER LOW BED: 40 TON 6 WHEEL	S70594	24	
SEM-TRAILER FLATBED:BREAKBULK/CONTAINER	S70159	23	
TRAILER FLAT BED: 7 1/2 TON 4 WHEEL	T96838	22	
TRUCK, CARGO, TACTICAL, W/W-LT CR, HEMTT	T39518	21	

## Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
TRUCK UTILITY: TOW CARRIER ARMD, HMMWV	T05096	21	
TRUCK CARGO: TACTICAL W/LT CRANE, HEMTT	T59278	21	
TRUCK TRACTOR: LINE HAUL C/S 50000 GVWR 6X4, M915	T61103	19	
RAMP LOADING VEHICLE: WHL MTD 16000 LB	R11154	19	
TRUCK AMBULANCE: 2 LITTER ARMD, HMMWV	T38707	19	
TRUCK AMBULANCE: 4 LITTER ARMD, HMMWV	T38844	19	
TRUCK TRACTOR: LET 6X6 66000 GVW W/W C/S	T91656	18	
TRUCK UTILITY: ARMT CARRIER ARMD W/W, HMMWV	T92310	18	
TRUCK UTILITY: CARGO/TROOP CARRIER W/W, HMMWV	T61562	18	
TRUCK UTILITY: ARMT CARRIER ARMD, HMMWV	T92242	18	
TRUCK TANK: FUEL SERVICING 2500 GAL, W/W, HEMTT	T58161	17	
TRUCK UTILITY: CARGO/TROOP CARRIER, HMMWV	T61494	17	
TRUCK UTILITY: S250 SHELTER CARRIER 4X4, HMMWV	T07543	17	
TRUCK CARGO: TACTICAL W/W MED CRANE, HEMTT	T39654	17	
TRUCK, M985, CARGO, W/MED CR, HEMTT	T39586	16	
SEMITRAILER TANK: 5000 GAL FUEL DISPENSING AUTO	S73372	16	
TRUCK TANK: FUEL SERVICING 2500 GALLON, HEMTT	T87243	16	
TRUCK WRECKER: TACTICAL W/W, HEMTT	T63093	15	
SEMITRAILER FLAT BED: BREAKBULK/CONT TRANSPORTER	S70027	13	
SEMITRAILER TANK: 5000 GAL BULK HAUL	S10059	13	
TRUCK CARGO: HEAVY PLS TRANSPORTER W/MHE	T41067	13	
BED CARGO: DEMOUNTABLE PLS 8X20	B83002	12	
TRUCK TRACTOR: HVY EQUIPMENT TRANSPORTER (HET)	T59048	12	
TRUCK DUMP: MTV	T64911	11	
TRAILER FLAT BED: 11 TON 4 WHEEL (HEMAT)	T45465	11	
TRANSPORTER, PALLETIZED LOAD SYSTEM (PLS)	T40999	10	
TRUCK VAN: LMTV	T93484	9	
TRUCK UTILITY, HMMWV M1097	T07679	9	
TRAILER CARGO: HIGH MOBILITY 1-1/4 TON	T95924	9	
TRUCK CARGO: MTV LWB W/W	T61772	8	
TRUCK UTILITY: EXPANDED CAPACITY, HMMWV M1113	T61630	8	
TRAILER: PALLETIZED LOADING 8X20	T93761	7	
TRUCK UTILITY: UP ARMORED, HMMWV M1114	T92446	7	
SEMITRAILER LOW BED: 70 TON HET	S70859	7	
TRAILER CARGO: HIGH MOBILITY 3/4 TON	T95992	6	
TRUCK CARGO: MTV W/W	T41135	6	
TRUCK TRACTOR: MTV	T61239	5	
TRUCK CARGO: MTV LWB	T61704	4	
TRUCK WRECKER: MTV W/W	T94709	4	
TRUCK CARGO: LMTV	T60081	4	
TRUCK: CARGO, HEMTT W/LHS	T96496	3	
TRUCK CARGO: MTV	T61908	3	
TRUCK CARGO: LMTV W/W	T60149	3	
TRAILER CARGO: M1082 LMTV W/DROPSIDES	T96564	3	
TRUCK CARGO: MTV W/MHE	T41203	2	

**ARNG**  
**Average Age of Equipment**

Table 2

Nomenclature	Equip No.	Average Age	Remarks
CONTAINER HANDLING: CONTAINER HANDLING UNIT (CHU)	C84862	2	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	2	
TRUCK TRACTOR: MTV W/W	T61307	2	
TRUCK UTILITY, HMMWV M1151A1	T34704	1	
TRUCK DUMP 10 TON, MTV	Z00477		
<b>COMMAND AND CONTROL</b>			
COMPUTER SYSTEM DIGITAL: AN/TYQ-109(V)1	C27707	4	
<b>ENGINEER</b>			
TRACTOR, FULLTRACKED, LOW SPEED	W76816	31	
LOADER SCOOP TYPE: DED 4X4 ROCK BUCKET (CCE)	L76315	31	
TRACTOR FULL TRCKD: DSL W/BULDOZ W/RIPPER (CCE)	W88699	31	
LOADER SCOOP TYPE: DED 4X4 GP BUCKET (CCE)	L76321	30	
TRUCK CONCRETE: MOBILE MIXER 8 CU YD (CCE)	T42725	28	
BOAT LANDING INFLATABLE: 15 MAN ASSAULT CRAFT	B83856	25	
GRADER ROAD MOTORIZED: DSL DRVN SECTIONALIZED	J74886	25	
TRUCK LIFT FORK: DED 4000 LB ROUGH TERRAIN	T49255	25	
TRUCK LIFT FORK: DED 50000 LB CONT HDLR ROUGH TERRAIN	T48941	24	
LOADER SCOOP TYPE: DSL W/MULTIPURPOSE BUCKET	L76556	23	
FIRE FIGHTING EQUIPMENT SET: TRUCK MTD	H56391	23	
TRACTOR, FULLTRACKED, LOW SPEED, DED, MED	W83529	23	
DISTRIBUTOR WATER TANK TYPE: 6000 GL SEMITRAILER MTD (CCE)	D28318	23	
GRADER ROAD MOTORIZED: DSL DRVN HVY (CCE)	G74783	23	
SCRAPER EARTH MOVING SELF-PROPELLED (CCE)	S56246	23	
TRUCK DUMP: 20 TON DSL DRVN 12 CU YD CAP (CCE)	X44403	22	
BOAT BRIDGE ERECTION: SHALLOW DRAFT	B25476	20	
TRACTOR WHEELED: DSL W/EXCAVATOR & FRNT LOADER	T34437	19	
RAMP BAY BRIDGE FLOATING:	R10527	17	
TRUCK LIFT FORK: DED 6000 LB VARIABLE REACH RT AMMO HDLG	T48944	15	
TRACTOR FULL TRACKED HIGH SPEED: ARMORED COMBAT EARTHMOVER (ACE)	W76473	14	
INTERIOR BAY BRIDGE FLOATING:	K97376	12	
TRANSPORTER COMMON BRIDGE:	T91308	11	
EXCAVATOR: HYDRAULIC (HYEX) TYPE I MULTIPURPOSE CRAWLER MOUNT	E27792	11	
COMPACTOR HIGH SPEED: TAMPING, SP (CCE)	E61618	9	
CRADLE: IMPROVED BOAT (IBC) M14	C33925	9	
PALLET: BRIDGE ADAPTER (BAP)M15	P78313	7	
TRUCK LIFT: FORK VARIABLE REACH ROUGH TERRAIN	T73347	7	
ATEC ALL TERRAIN CRANE 22.5 TON	C36586	7	
BOAT RECONNAISSANCE: PNEUMATIC 3-MAN	B84404	7	
EXCAVATOR: HYDRAULIC (HYEX) TYPE III MULTIPURPOSE	E27860	6	
EXCAVATOR: HYDRAULIC (HYEX) TYPE II MULTIPURPOSE	E41791	6	
TRACTOR FULL TRACKED HIGH SPEED (DEUCE)	T76541	6	
ENGINEER MISSION MODULE: M6 DUMP BODY - EMM	D17391	5	

## Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
SCRAPER ELEVATING: SELF PROPELLED 9-11 CU YD	S30039	2	
TRUCK: TACTICAL FIREFIGHTING, HEMTT	Z42024	2	
<b>LOGISTICS</b>			
TRAILER TANK: WATER 400 GALLON 1-1/2 TON 2 WHEEL	W98825	26	
GEN ST ENGINE DRIVEN: 10KW DC 28V MULTIFUEL WHL MTD TAC UTILITY	G38140	23	
TANK UNIT LIQUID DISPENSING TRAILER MOUNTING:	V19950	22	
POWER PLANT ELECTRIC: AN/MJQ-15	P28075	21	
POWER PLANT ELEC DED TM: 10KW 60HZ 2EA MTD ON M103A1-AN/MJQ-18	P28015	21	
TANK AND PUMP UNIT LIQUID DISPENSING TRK/MTD	V12141	19	
GEN ST DSL ENG TM: 10KW MTD ON M116 PU-753/M	G40744	18	
POWER PLANT: ELECTRIC TRL/MTD 60KW AN/MJQ-41	P42194	15	
GENERATOR SET: DIESEL TRL/MTD 60KW PU805 CHASSIS	G78306	14	
POWER PLANT ELEC DED TM: 5KW 60HZ AN/MJQ-35	P28083	14	
WATER PURIFICATION: REVERSE OSMOSIS 3000 GPH TLR/MTD	W47225	12	
POWER PLANT: ELECTRIC TRAILER MTD 30KW AN/MJQ-40	P42126	12	
POWER PLANT ELEC DED TM: 5KW AN/MJQ-36	P28151	12	
POWER PLANT: DIESEL TRL/MTD 10KW AN/NJQ-37	P42262	11	
GEN SET: DED SKID MTD 15KW 50/60HZ	G12170	10	
GEN SET: DED SKID MTD 10KW 60HZ	G74711	10	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	9	
GEN SET DED TM: 10KW 400HZMTD ON M116A2 PU-799	G53403	9	
GEN SET: DED SKID MTD 60KW 50/60HZ	G12034	9	
GENERATOR SET DIESEL ENGINE TM: PU-803	G35851	9	
GENERATOR SET DIESEL: 60HZ AC	G36237	8	
GEN SET DED TM: 10KW 60HZ MTD ON M116A2 PU-798	G42170	8	
GEN SET DED TM: 5KW 60HZ MTD ON M116A2 PU-797	G42238	8	
CONTAINERIZED KITCHEN: CK	C27633	7	
GENERATOR SET DIESEL ENGINE TM: PU-802	G53778	7	
GENERATOR SET: DIESEL ENG TRLR -MTD 15KW 60HZ	G78374	2	
<b>FORCE PROTECTION</b>			
SHELTER SYSTEM COLLECTIVE PROTECTION CHEMICAL-BIOLOGICAL: 10-MAN	T00474	28	
<b>SECURITY</b>			
PUMPING ASSY FLAMBL LIQ ENG DRVN	P97051	12	

### Service Procurement Program - Reserve (P-1R)

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

Nomenclature	FY 2009	FY 2010	FY 2011
<b>AIRCRAFT</b>			
JOINT CARGO AIRCRAFT (JCA)	\$258,622,000		\$424,125,000
ARMED RECONNAISSANCE HELICOPTER	287,730,000		
HELICOPTER, LIGHT UTILITY (LUH)		112,500,000	94,500,000
UH-60 BLACKHAWK (MYP)	39,600,000	182,400,000	39,600,000
<b>MODIFICATION OF AIRCRAFT</b>			
CH-47 CARGO HELICOPTER MODS			155,750,000
UTILITY/CARGO AIRPLANE MODS	8,500,000	8,710,000	3,818,000
AIRBORNE AVIONICS		12,000	
GLOBAL AIR TRAFFIC MANAGEMENT (GATM) ROLLUP		3,808,000	6,418,000
<b>SUPPORT EQUIPMENT &amp; FACILITIES</b>			
COMMON GROUND EQUIPMENT	21,573,000	18,355,000	13,809,000
AIR TRAFFIC CONTROL	37,094,000	94,000	
AIRBORNE COMMUNICATIONS	55,000	55,000	
<b>OTHER MISSILES</b>			
JAVELIN (AAWS-M) SYSTEM SUMMARY	89,222,000	98,065,000	
MLRS REDUCED RANGE PRACTICE ROCKETS (RRPR)	9,666,000	7,633,000	7,802,000
HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS)	160,842,000	124,927,000	202,627,000
<b>MODIFICATION OF MISSILES</b>			
ITAS/TOW MODS	84,751,000	6,800,000	3,600,000
HIMARS MODIFICATIONS	8,696,000	10,292,000	8,459,000
SPARES AND REPAIR PARTS	7,013,000	6,730,000	15,936,000
<b>TRACKED COMBAT VEHICLES</b>			
STRYKER VEHICLE	245,620,000	174,889,000	95,765,000
<b>MODIFICATION OF TRACKED COMBAT VEHICLES</b>			
FIST VEHICLE (MOD)	33,200,000	65,000,000	82,800,000
BRADLEY PROGRAM (MOD)	232,458,000	182,518,000	252,000,000
HOWITZER, MED SP FT 155MM M109A6 (MOD)	13,227,000	8,011,000	22,450,000
IMPROVED RECOVERY VEHICLE (M88A2 HERCULES)		9,637,000	175,362,000
ARMORED BREACHER VEHICLE	18,000,000	35,904,000	24,921,000
JOINT ASSAULT BRIDGE		19,800,000	21,911,000
M1 ABRAMS TANK (MOD)	83,358,000	74,000,000	174,000,000
<b>WEAPONS AND OTHER COMBAT VEHICLES</b>			
HOWITZER, LIGHT, TOWED, 105MM, M119	84,316,000	55,951,000	5,740,000
M240 MEDIUM MACHINE GUN (7.62MM)	23,831,000	14,664,000	10,000,000
MACHINE GUN, CAL .50 M2 ROLL	15,063,000	2,256,000	4,364,000
M249 SAW MACHINE GUN (5.56MM)	7,770,000	2,306,000	
MK-19 GRENADE MACHINE GUN (40MM)	8,236,000	3,533,000	1,031,000
MORTAR SYSTEMS	11,191,000	4,690,000	4,690,000

## Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2009	FY 2010	FY 2011
M107, CAL. 50, SNIPER RIFLE	223,000	229,000	242,000
XM320 GRENADE LAUNCHER MODULE (GLM)	7,294,000	1,179,000	472,000
XM110 SEMI-AUTOMATIC SNIPER SYSTEM (SASS)	562,000		
M4 CARBINE	61,055,000	39,568,000	36,752,000
SHOTGUN, MODULAR ACCESSORY SYSTEM (MASS)	1,748,000	8,000	29,000
HOWITZER LT WT 155MM (T)	40,030,000	33,213,000	30,681,000
MK-19 GRENADE MACHINE GUN MODS	114,000	128,000	137,000
M4 CARBINE MODS	7,989,000	621,000	102,000
M249 SAW MACHINE GUN MODS	61,000	77,000	50,000
M240 MEDIUM MACHINE GUN MODS	2,005,000	808,000	
M16 RIFLE MODS	3,000	101,000	
ITEMS LESS THAN \$5.0M (WOCV-WTCV)	1,112,000		
<b>TACTICAL VEHICLES</b>			
TACTICAL TRAILERS/DOLLY SETS	17,847,000	31,467,000	15,987,000
SEMITRAILERS, FLATBED	9,486,000	4,566,000	786,000
SEMITRAILERS, TANKERS	23,405,000		
HI MOB MULTI-PURP WHLD VEH (HMMWV)	404,712,000	802,931,000	355,302,000
FAMILY OF MEDIUM TACTICAL VEH (FMTV)	537,427,000	597,501,000	148,107,000
FIRETRUCKS & ASSOCIATED FIREFIGHTING EQUIPMENT	6,240,000		
FAMILY OF HEAVY TACTICAL VEHICLES (FHTV)	391,187,000	466,304,000	197,045,000
ARMORED SECURITY VEHICLES (ASV)	62,413,000	104,007,000	104,952,000
MINE PROTECTION VEHICLE FAMILY	65,880,000	65,400,000	
TRUCK, TRACTOR, LINE HAUL, M915/M916	7,413,000	26,605,000	32,956,000
HEMTT EXT SERV PROGRAM	12,539,000		
<b>JOINT COMMUNICATIONS</b>			
WIN-T - GROUND FORCES TACTICAL NETWORK	62,138,000	8,860,000	43,420,000
<b>SATELLITE COMMUNICATIONS</b>			
NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE)	41,807,000	57,682,000	52,895,000
SMART-T (SPACE)	41,342,000		
GLOBAL BRDCST SVC - GBS	8,775,000	2,962,000	823,000
HIGH CAPACITY COMMUNICATIONS CAPABILITY (HC3)		12,600,000	
MOD OF IN-SVC EQUIPMENT (TAC SAT)		1,172,000	1,556,000
<b>COMMUNICATIONS - C3 SYSTEM</b>			
ARMY GLOBAL CMD & CONTROL SYS (AGCCS)	2,132,000	1,200,000	
<b>COMBAT COMMUNICATIONS</b>			
ARMY DATA DISTRIBUTION SYSTEM (DATA RADIO)	3,604,000	3,604,000	
SINGGARS FAMILY	84,888,000	31,285,000	1,870,000
COMMS-ELEC EQUIPMENT FIELDING	3,280,000	3,329,000	3,583,000
SPIDER APLA REMOTE CONTROL UNIT		4,399,000	3,088,000
SOLDIER ENHANCEMENT PROGRAM COMM/ELECT	354,000	762,000	151,000
COMBAT SURVIVOR EVADER LOCATOR (CSEL)	3,842,000		
RADIO, IMPROVED HF (COTS) FAMILY	14,746,000	15,610,000	24,041,000
MEDICAL COMM FOR CBT CASUALTY CARE (MC4)	9,780,000	696,000	1,701,000

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Table 3

**Service Procurement Program - Reserve (P-1R)**

Nomenclature	FY 2009	FY 2010	FY 2011
<b>INFORMATION SECURITY</b>			
TSEC - ARMY KEY MGT SYS (AKMS)	17,852,000	9,300,000	9,334,000
INFORMATION SYSTEM SECURITY PROGRAM-ISSP	7,672,000	4,822,000	797,000
<b>TACTICAL INTELLIGENCE &amp; RELATED ACTIVITIES (TIARA)</b>			
ALL SOURCE ANALYSIS SYS (ASAS) (MIP)	31,084,000	6,358,000	5,956,000
PROPHET GROUND (MIP)	75,558,000	5,800,000	20,300,000
TACTICAL UNMANNED AERIAL SYS (TUAS) (MIP)		140,805,000	29,804,000
DIGITAL TOPOGRAPHIC SPT SYS (DTSS) (MIP)	16,750,000	4,250,000	
DCGS-A (MIP)	65,761,000	48,035,000	32,765,000
CI HUMINT AUTO REPRTING AND COLL (CHARCS)	6,904,000	1,859,000	1,981,000
ITEMS LESS THAN \$5.0M (MIP)	19,671,000	12,149,000	12,522,000
<b>TACTICAL SURVEILLANCE</b>			
SENTINEL MODS	20,214,000	13,214,000	10,214,000
NIGHT VISION DEVICES	187,065,000	231,593,000	235,157,000
LONG RANGE ADV SCOUT SURVEILLANCE SYSTEM	48,202,000	75,536,000	129,798,000
NIGHT VISION, THERMAL WEAPON SIGHT	127,235,000	103,593,000	130,888,000
RADIATION MONITORING SYSTEMS	3,418,000		
ARTILLERY ACCURACY EQUIPMENT			300,000
PROFILER	11,200,000	11,300,000	20,800,000
MOD OF IN-SVC EQUIPMENT (FIREFINDER RADARS)	15,800,000	3,026,000	3,034,000
FORCE XXI BATTLE CMD BRIGADE & BELOW (FBCB2)	158,040,000	81,550,000	45,601,000
LTWT LASER DESIGNATOR/RANGEFINDER (LLDR)	61,466,000	37,238,000	15,964,000
COMPUTER BALLISTICS: LHMCB XM32	1,529,000		
MORTAR FIRE CONTROL SYSTEM	348,000		15,819,000
COUNTERFIRE RADARS	12,000,000		
<b>TACTICAL COMMAND &amp; CONTROL (C2) SYSTEMS</b>			
TACTICAL OPERATIONS CENTERS	132,387,000	92,066,000	126,866,000
FIRE SUPPORT C2 FAMILY	13,407,000	10,330,000	19,939,000
BATTLE COMMAND SUSTAINMENT SUPPORT SYSTEM (BCS3)	4,945,000	1,116,000	334,000
FAAD C2	3,000,000	3,000,000	2,500,000
AIR & MISSILE DEFENSE PLANNING & CONTROL SYSTEM (AMD PCS)	25,644,000	52,002,000	14,770,000
KNIGHT FAMILY	33,000,000	40,200,000	47,590,000
TC AIMS II	2,453,000	970,000	197,000
JOINT NETWORK MANAGEMENT SYSTEM (JNMS)	3,154,000	4,916,000	
TACTICAL INTERNET MANAGER	351,000	1,161,000	459,000
MANEUVER CONTROL SYSTEM (MCS)	29,871,000	25,475,000	9,142,000
SINGLE ARMY LOGISTICS ENTERPRISE (SALE)	11,179,000	11,128,000	6,440,000
MOUNTED BATTLE COMMAND ON THE MOVE (MBCOTM)	18,737,000	2,201,000	72,392,000
<b>OTHER COMMUNICATIONS &amp; ELECTRONICS EQUIPMENT</b>			
CSS COMMUNICATIONS	9,088,000	5,638,000	4,663,000
ITEMS LESS THAN \$5M (SURVEYING EQUIPMENT)	1,200,000	520,000	1,040,000
ITEMS UNDER \$5M (SSE)	3,660,000		

## Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2009	FY 2010	FY 2011
<b>CHEMICAL DEFENSIVE EQUIPMENT</b>			
CBRN SOLDIER PROTECTION	44,505,000	18,327,000	
SMOKE & OBSCURANT FAMILY: SOF (NON AAO ITEM)	4,042,000	3,234,000	1,562,000
<b>BRIDGING EQUIPMENT</b>			
TACTICAL BRIDGING	56,760,000	13,000,000	
TACTICAL BRIDGE, FLOAT-RIBBON	108,384,000	36,833,000	11,768,000
<b>ENGINEER (NON-CONSTRUCTION) EQUIPMENT</b>			
HANDHELD STANDOFF MINEFIELD DETECTION SYS-HST	17,528,000	16,613,000	15,966,000
GRND STANDOFF MINE DETECTION SYSTEM (GSTAMIDS)		7,914,000	9,895,000
EXPLOSIVE ORDNANCE DISPOSAL EQPMT (EOD EQPMT)	16,910,000	17,002,000	17,828,000
<b>COMBAT SERVICE SUPPORT EQUIPMENT</b>			
HEATERS AND ECU'S	4,757,000	2,732,000	2,056,000
SOLDIER ENHANCEMENT	1,705,000	4,203,000	2,747,000
FIELD FEEDING EQUIPMENT	18,498,000	10,655,000	6,278,000
PARACHUTE & AERIAL DEL SYS	1,028,000	4,555,000	4,578,000
ITEMS LESS THAN \$5M (ENG SPT)	5,108,000	3,045,000	1,018,000
<b>PETROLEUM &amp; WATER EQUIPMENT</b>			
DISTRIBUTION SYSTEMS, PETROLEUM & WATER	15,069,000	34,163,000	28,059,000
WATER PURIFICATION SYSTEMS	14,262,000	12,231,000	7,335,000
<b>MEDICAL EQUIPMENT</b>			
COMBAT SUPPORT MEDICAL	3,908,000	10,134,000	4,850,000
<b>MAINTENANCE EQUIPMENT</b>			
MOBILE MAINTENANCE EQUIPMENT SYSTEMS	17,752,000	58,178,000	60,169,000
<b>CONSTRUCTION EQUIPMENT</b>			
GRADER, ROAD MTZD, HVY, 6X4 (CCE)	15,482,000		
SKID STEER LOADER (SSL) FAMILY OF SYSTEM	7,650,000	9,000,000	8,652,000
SCRAPERS, EARTHMOVING			9,756,000
MISSION MODULES - ENGINEERING	26,609,000	47,158,000	48,652,000
LOADERS	12,320,000	9,488,000	
TRACTOR, FULL TRACKED	12,150,000	6,400,000	
PLANT, ASPHALT MIXING	4,836,000	5,000,000	4,987,000
HIGH MOBILITY ENGINEER EXCAVATOR (HMEE) FOS	13,190,000	6,450,000	2,708,000
CONSTRUCTION EQUIPMENT ESP	3,000,000	3,400,000	3,996,000
ITEMS LESS THAN \$5.0M (CONSTRUCTION EQUIPMENT)	3,450,000	4,040,000	5,156,000
<b>OTHER SUPPORT EQUIPMENT</b>			
GENERATORS AND ASSOCIATED EQUIPMENT	59,467,000	47,204,000	42,298,000
ROUGH TERRAIN CONTAINER HANDLER (RTCH)	16,082,000	14,234,000	27,636,000
ALL TERRAIN LIFTING ARMY SYSTEM	21,521,000	16,996,000	2,960,000
INTEGRATED FAMILY OF TEST EQUIPMENT (IFTE)	3,409,000	26,371,000	25,218,000
GENERAL PURPOSE ELECTRONIC TEST EQUIPMENT (GPETE)	7,136,000	12,479,000	6,614,000
<b>TOTAL</b>	<b>\$5,443,430,000</b>	<b>\$5,054,604,000</b>	<b>\$4,298,314,000</b>

## National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
<b>TRAINING</b>				
DEPLOYABLE FORCE-ON-FORCE INSTRUMENTED RANGE SYSTEM (DFIRST) - FLEXTRAIN	4,950,000	18,000,000		
LASER MARKSMANSHIP TRAINER (LMTS)	1,350,000			
MOBILE CONDUCT-OF-FIRE TRAINER (MCOFT) XXI - BCT	1,760,000			
MOBILE CONDUCT-OF-FIRE TRAINER (MCOFT) XXI - M2	810,000			
FATS IV - M4 ENGAGEMENT SKILLS TRAINER	2,061,800			
FATS IV DIGITIZATION	2,000,000			
FATS IV - M19 ENGAGEMENT SKILLS TRAINER	160,800			
FATS IV - M240 ENGAGEMENT SKILLS TRAINER	88,400			
FATS IV - M2 ENGAGEMENT SKILLS TRAINER	74,600			
FATS IV - M249 ENGAGEMENT SKILLS TRAINER	44,400			
ARMY BATTLE COMMAND SYSTEM TRAINING SYSTEM		5,225,800		
VIRTUAL WARRIOR INTERACTIVE (VWI)		4,000,000		
<b>SOLDIER EQUIPMENT</b>				
AN/PVS-14 NIGHT VISION GOGGLES	16,282,500			
M4 CARBINE	1,814,400			
INDIVIDUAL CHEMICAL AGENT MONITOR	360,000			
<b>INTEROPERABILITY</b>				
MOVEMENT TRACKING SYSTEM (MTS)	113,553,600	2,976,600		
FORCE XXI BATTLE COMMAND, BRIGADE AND BELOW (FBCB2)		10,500,000		
SINGARS RADIOS	15,408,900			
AN/PRC-117F SATCOM RADIOS (LIN Z00876)		2,420,000		
AN/PRC-150C HF RADIOS (LIN Z00873)		2,250,000		
JOINT NETWORK NODE (JNN) - JOINT CONUS COMMUNICATIONS SUPPORT ENTERPRISE (JCCSE)	55,000,000			
JOINT NETWORK NODE (JNN) - UEX	48,300,000			
JOINT NETWORK NODE (JNN) - FIRES BRIGADE	44,000,000			
JOINT NETWORK NODE (JNN) - MANUEVER ENHANCEMENT BRIGADE	37,600,000			
JOINT NETWORK NODE (JNN) - SUSTAINMENT BRIGADE	8,800,000			
TACTICAL QUIET GENERATOR (TQG)	4,368,000			
<b>AVIATION MOBILITY &amp; SPECIAL EQUIPMENT</b>				
HOIST HIGH PERFORMANCE	5,900,000			
UH-60 & UH-1 HIGH PERFORMANCE HOIST (LIN H39331)		9,990,000		
MODIFICATION KIT: UTILITY HOIST UH-60 (LIN M59733)		2,601,154		
UH-60 BLACKHAWK REMOVE AND REPLACE TASK TRAINER	2,583,000			

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
CH-47 MAINTENANCE TRAINER	1,700,000			
VIRTUAL DOOR GUNNERY TRAINER (VDGT)		850,000		
TOOL SET AVIATION UNIT MAINTENANCE: SET NO 2 AIRMOBILE (LIN W60206)		833,358		
TOOL KIT TUBE SWAGING (LIN T57982)		466,688		
SCALE AIRCRAFT WEIGHING (LIN S41732)		103,055		
TEST SET: AVIATION VIBRATION ANALYZER (LIN T53635)		112,896		
TEST SET AIRCRAFT FUEL QUANTITY GAGE: PORTABLE (LIN V77715)		84,112		
MAINTENANCE PLATFORM: HYDRAULIC ADJUSTABLE B4A (LIN M02504)		14,336		
<b>MOBILITY</b>				
MTV M1083 5-TON CARGO TRUCK	80,392,650			
HEAVY EXPANDED MOBILITY TACTICAL TRUCK (HEMTT) TANKER, M978	27,950,000			
HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) SHELTER, M1097/M1192	3,940,000			
M1078 LMTV 2.5-TON CARGO	157,725,000			
M1089 MTV WRECKER 5-TON	45,797,458			
M1088 MTV TRACTOR 5-TON	31,093,696			
M915A3 TRACTOR	7,680,000			
M872 TRAILER FOR M915 TRACTOR	6,045,000			
M916A3 LINE HAUL TRUCK		4,380,000		
<b>OTHER</b>				
AUTOMATIC FLIGHT FOLLOWING SYSTEM MCENTIRE AIR BASE	1,000,000			
COOP HARDWARE UPGRADE		6,000,000		
ARNG DATA WAREHOUSE HARDWARE UPGRADE		2,100,000		
INTRUSION DETECTION PREVENTION SYSTEM		1,792,000		
HELICOPTER UTILITY: UH-60A TO UH-60L UPGRADE KIT			71,400,000	
CH-47F TRANSPORTABLE FLIGHT PROFICIENCY SIMULATOR (TFPS)			17,100,000	
JOINT SERVICE TRANSPORTABLE DECONTAMINATION SYSTEM-SMALL SCALE (JSTDS-SS)			10,836,000	
HMMWV, UP-ARMORED (M1151A1B1, M1152A1, M1165A1)			72,243,780	
FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV)			175,621,551	
HEAVY EXPANDED MOBILITY TACTICAL TRUCK (HEMTT)			51,159,375	
SEMITRAILER LOW BED: 40 TON 6 WHEEL W/E			9,700,000	
TRAILER CARGO: LIGHT TACTICAL 3/4 TON			6,722,000	
SEMITRAILER FLATBED: BREAKBULK/CONTAINER			22,425,038	
TACTICAL QUIET GENERATOR (TQG)			20,374,234	
EXCAVATOR: HYDRAULIC (HYEX) TYPE I MULTIPURPOSE CRAWLER MOUNT			2,400,000	
LOADER SKID STEER: TYPE II TRACK HVY DED			11,466,000	

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Table 4

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
LOADER SKID STEER: TYPE III TRACK OVER WHEEL LIGHT ABN/AMBL			6,615,000	
SIGHT: THERMAL AN/PAS-13B(V)1			5,004,800	
SIGHT: THERMAL AN/PAS-13			7,036,400	
TANK, WATER CAMEL 800 GAL, 5TON			10,000,000	
RADIO SET: AN/PSC-5			5,400,000	
SINGGARS RADIOS			14,000,000	
ILLUMINATOR: INFRARED AN/PEC-15			1,350,000	
LASER MARKSMANSHIP TRAINER (LMTS)			8,370,000	
XCTC - FLEXTRAIN			14,625,000	
ARMY BATTLE COMMAND SYSTEM (ABCS) EQUIPMENT			7,955,575	
COMBAT ARMS TRAINING SYSTEM (CATS) FOR ARNG			522,000	
TABLETOP TRAINERS (TGT, TFT, TMT )			800,250	
LASER SHOT			800,000	
PAPRS SUIT W/HYDRATION CAPABILITY			9,901,500	
XTS 5000 RADIOS FOR CST UPGRADES			3,520,000	
XTS 5000 RADIOS FOR CERFP SHORTAGE			3,125,000	
LEVEL B SUITS FOR CST UPGRADES			39,950	
LEVEL B SUITS FOR CERFP			137,020	
CERFP RADIATION DETECTION DEVICE			940,670	
GUARDIAN DEFENDER (CST RADIATION DETECTION EQUIPMENT)			650,000	
MASK UPGRADE			818,209	
LUH-72A MISSION EQUIPMENT PACKAGE			10,500,000	
TDFM 6148 RADIO			1,525,000	
TUAS SIMULATOR			9,252,000	
CYBERLUX BRIGHTEYE LIGHT SET			183,330	
WATER PURIFIER: LIGHTWEIGHT			5,011,860	
VENTILATOR VOLUME PTBL			2,080,000	
X-RAY: APPARATUS DEN			273,428	
X-RAY APPARATUS: LOW CAPACITY PORT			317,680	
DEFIBRILLATOR MONITOR RECORDER: 120/230V 50/60HZ AC OR DC			1,398,400	
FIREWALL, ROUTERS, FIBER SWITCH, INTRUSION PROTECTION SYSTEM, CABINET, THIN CLIENT, MONITOR, INSTALLATION AND SHIPPING			9,900,000	
COOP - STORAGE AREA NETWORK			5,000,000	
BCT JOINT NODE NETWORK (JNN), WIN-T INC 1			5,100,000	
DRIVERS ENHANCERS: AN/VAS-5			7,663,950	
BLACKHAWK MOD - INTEGRATED HEALTH MANAGEMENT SYSTEM (IHMS)			14,342,000	
<b>TOTAL</b>	<b>\$730,594,204</b>	<b>\$74,699,999</b>	<b>\$645,607,000</b>	

### Projected Equipment Transfer/Withdrawal Quantities

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the Active receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty	Remarks
ALARM: CHEMICAL AGENT AUTOMATIC M22	A33020	+6	+2		
RADAR SET: AN/TPQ-37(V)1	A41666	+1			
BOAT BRIDGE ERECTION INBOARD ENGINE: SHALLOW DRAFT	B25476	+12			
COMPUTER SET: DIGITAL OL-584/TYQ	C18582	+2			
COMPUTER SET: DIGITAL OL-591/TYQ	C18718		+11		
COMPUTER SYSTEM: DIGITAL AN/TYQ-129(V)2	C27435			+4	
CONTAINERIZED KITCHEN: CK	C27633		+16	+3	
COMPUTER SYSTEM: DIGITAL AN/TYQ-109(V)1	C27707	+2			
COMPUTER SYSTEM: DIGITAL AN/TYQ-109(V)2	C27775			+3	
COMPUTER SET: DIGITAL OL-590/TYQ(SAMS 1 CONFIG	C28078	+6	+34	+2	
COMMAND SYSTEM: TACTICAL AN/TSQ-221	C61597		+1		
COLLECTIVE PROTECTION EQUIPMENT: NBC SIMPLIFIED M20	C79000			+4	
CAMOUFLAGE NET SYSTEM RADAR SCATTERING: AN/USQ-159	C89480			+245	
CENTRAL COMMUNICATIONS: AN/TSQ-190(V)3	C89935		+4		
DIG TOPOGRAPH SYS: AN/TYQ-67(V)	D10281		+6	+1	
DISTRIBUTOR WATER TANK TYPE: 6000 GL SEMITRAILER MTD (CCE)	D28318		+5		
DECONTAMINATING APPARATUS: PWR DRVN LT WT	D82404	+121		+4	
DEFIBRILLATOR MONITOR RECORDER: 120/230V 50/60HZ AC/DC	D86072			+2	
EXCAVATOR: HYDRAULIC (HYEX) TYPE I MULTIPURPOSE	E27792	+1			
FORWARD AREA REFUELING SYSTEM: ADV AVIATION (AAFARS)	F42611	+23			
FIGHTING VEHICLE: FULL TRACKED INFANTRY (IFV) M2A3	F60564	+37			
FIGHTING VEHICLE: FULL TRACKED CAVALRY (CFV) M3A3	F90796	+23			
GEN SET: DED SKID MTD 3KW 60HZ	G18358		+87		
GEN SET: DED SKID MTD 30KW 50/60HZ	G74575	+2			
GENERATOR SET: DIESEL ENG TRLR MTD 15KW 60HZ	G78374	+1			
ELECTRONIC SHOP SHELTER MOUNTED AVIONICS: AN/ASM-146	H01907			+1	
HELICOPTER CARGO TRANSPORT: CH-47D	H30517	+5	+7	+4	
HELICOPTER UTILITY: UH-60L	H32361	+9			
HIGH MOBILITY ARTILLERY ROCKET SYSTEM: HIMARS	H53326	+34			
HOWITZER LIGHT TOWED: M119	H57505	+2			
ILLUMINATOR: INFRARED AN/PEQ-2	J03261		+385	+125	
FUEL SYSTEM SUPPLY POINT: PTBL 60000 GAL	J04717	+5		+5	
KITCHEN: COMPANY LEVEL FIELD FEEDING	K28601			+3	
LAUNCHER: GRENADE M203A1	L46007		+44		
LOADER SCOOP TYPE: DSL W/MULTI PURP BUCKET	L76556	+1			
MACHINE GUN 5.56 MILLIMETER: M249	M09009	+11	+26		
MASK CHEMICAL BIOLOGICAL: M40	M12418	+102			
MOUNT GUN: RING CAL .50	M74364			+15	

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Table 5

**Projected Equipment Transfer/Withdrawal Quantities**

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty	Remarks
MONOCULAR NIGHT VISION DEVICE: AN/PVS-14	M79678	+41			
MACHINE GUN GRENADE 40MM: MK19 MOD III	M92362	+9			
MACHINE GUN: 7.62MM M240B	M92841	+541			
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS-5	N04596		+275	+54	
NIGHT VISION SIGHT SET: AN/UAS-11	N05050		+3		
NIGHT VISION GOGGLE: AN/PVS-7B	N05482	+2,844	+1,921		
NAVIGATION SET: SATELLITE SIGNALS AN/PSN-13	N96248	+208	+722		
POWER PLANT: ELECTRIC TLR MTD 30KW 50/60HZ AN/MJQ-40	P42126			+2	
PJH SURFACE VEHICLE RADIO SET: AN/VSQ-2(V)	P49587		+2	+8	
RADAR SET: AN/TPQ-36(V)8	R14284	+2			
RADIO SET: HIGH FREQUENCY AN/ARC-220 (V)1	R22436			+4	
RADIO SET: AN/GRC-213	R30895	+271			
RECONNAISSANCE SYSTEM NBC: M93A1 FOX	R41282	+1			
RADIO SET: AN/VRC-92F(C)	R45543			+2	
RADIO SET: AN/PSC-5	R57606		+9	+23	
RADIO SET: AN/PSC-11	R57810	+3	+22		
RANGE FINDER TARGET DESIGNATOR: LASER AN/PED-1	R60282	+8	+57		
RADIO SET: AN/VRC-90F(C)	R68044			+27	
RADIO SET: AN/VRC-91D	R68078		+2	+13	
RADIO SET: AN/PRC-119F(C)	R83141	+436			
RIFLE 5.56 MILLIMETER: M16A2	R95035	+154	+1		
SHOP EQUIPMENT: CONTACT MAINTENANCE ORD/ENG TRK MTD	S25681	+33	+22	+80	
SCRAPER ELEVATING: SELF PROPELLED 8-11 CU YD	S29971			+2	
SANITATION CENTER: FOOD	S33399	+11	+49	+19	
SATELLITE COMMUNICATIONS TERMINAL: AN/TSC-93A	S34963	+1			
SIGNAL GENERATOR: SG-1219/U	S48255	+4			
KNIGHT: M707	S50205	+5			
SIGHT: REFLEX COLLIMATOR	S60288	+40			
SIGHT: THERMAL AN/PAS-13B(V)1	S60356	+954	+6,368		
SEMITRAILER FLATBED: BREAKBULK/CONTAINER TRANSPORT 34T	S70159		+1		
SEMITRAILER LOW BED: 40 TON 6 WHEEL	S70594	+9		+4	
SIGHT: NIGHT VISION SNIPERSCOPE AN/PVS-10	S90433	+53			
SIGHT: THERMAL AN/PAS-13	S90535	+1,169	+3,518	+103	
SIGHT: THERMAL AN/PAS-13A	S90603	+1,589	+3,065		
TRUCK UTILITY: S250 SHELTER CARRIER 4X4 (HMMWV)	T07543		+8		
TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679		+183		
TRACTOR WHEELED: DSL 4X4 W/EXCAVATOR AND FRONT LOADER	T34437	+3		+2	
TRUCK: UTILITY M1151 EXPANDED CAPACITY	T34704		+120		
TARGET ACQ SUBSYS: COMMON GROUND STATION AN/TSQ-179	T37036		+1	+1	
SHOTGUN 12 GAUGE RIOT TYPE: 20 INCH BARREL	T39223	+901	+251	+43	
TRUCK CARGO: TACTICAL HEMTT W/MED CRANE	T39586			+2	
TRUCK CARGO: 5 TON 6X6 MTV W/W LAPES/AD	T41104	+7			
TRUCK CARGO: MTV W/W	T41135		+25		

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Table 5

**Projected Equipment Transfer/Withdrawal Quantities**

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Qty</b>	<b>FY 2010 Qty</b>	<b>FY 2011 Qty</b>	<b>Remarks</b>
TRUCK CARGO: MTV W/MHE	T41203		+19	+5	
TERMINAL RADIO TELEPHONE MOBILE SUBSCRIBER: AN/VRC-97	T55957			+3	
TRUCK UTILITY: CARGO/TROOP CARRIER, HMMWV	T61494		+498		
TRUCK UTILITY: EXPANDED CAPACITY, HMMWV M1113	T61630			+6	
TRUCK CARGO: MTV LWB	T61704		+11		
TRACTOR FULL TRACKED HIGH SPEED: DEPLOYABLE (DEUCE)	T76541			+3	
TRUCK UTILITY: EXPANDED CAPACITY UP ARMORED HMMWV	T92446	+57			
TEST SET: ELECT SYS AN/PSM-95	T92889		+265	+31	
TRUCK WRECKER: MTV W/W	T94709		+3	+3	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555			+8	
TRAILER CARGO: HIGH MOBILITY 1 1/4 TON	T95924		+43		
LIGHT TACTICAL TRAILER: 3/4 TON	T95992	+587		+33	
TRAILER CARGO: M1082 LMTV W/DROPSIDES	T96564	+4		+2	
TEST ST: RADAR TS-4530()/UPM	T99847		+15		
TEST FACILITIES KIT: MK 994/AR	V61444			+2	
VENTILATOR VOLUME PTBL:	V99788	+2	+3		
TRAILER CARGO: 3/4 TON 2 WHEEL	W95537	+4		+12	
TRAILER CARGO: 1 1/2 TON 2 WHEEL	W95811		+23	+27	
VEHICLE AERIAL UNMANNED (UAV) SYSTEM: RAVEN	Z00446		+72		
INTERFACE UNIT COMM EQUIP: OL-713(V)1/TYQ CSS VSAT	Z00560	+2			
HELICOPTER: ARMED RECONNAISSANCE	Z00691		+20	+17	
HF RADIO SET: AN/PRC-150C MANPACK (COT/NDI)	Z00873		+6		
FUEL FARM MOBILE MODULAR: DEMOUNTABLE ISO CONFIG	Z28886		+3	+2	
GROUND CONTROL STATION (GCS): (TUAV SHADOW)	Z49008			+4	

**FY 2005 Planned vs Actual Procurements and Transfers**

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGREA columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b><u>FY 2005 PLANNED TRANSFERS &amp; WITHDRAWALS</u></b>							
AVIATION NIGHT VISION GOGGLE, AN/AVS-6	A06352	+740	0				
AIRPLANE, CARGO, C-23	A29880	+4	0				
ALARM,CHEMICAL AGENT,AUTOMATIC,M8A1	A32355	+2,644	0				
ALARM CHEM DET M22	A33020	+417	0				
ARMORED PERSONNEL CARRIER M113A3	C18234	+2	0				
CRANE,WHEEL MOUNTED,20T	F39378	+1	0				
ATEC CRANE	F43429	+1	0				
FIRE UNIT VEHICLE MOUNTED,AVENGER	F57713	+24	0				
CAVALRY FIGHTING VEHICLE M3A2 (BRADLEY)	F60530	+34	0				
GENERATOR SET, DSL ENG, SKID MTD, 3KW, 60HZ, AC, 120/208	G54041	+342	0				
GUN LAYING POSITIONING SYSTEM	G97730	+71	0				
HELICOPTER,ATTACK AH-64	H28647	+54	0				
HELICOPTER,CARGO CH-47D	H30517	+13	0				
HELICOPTER,UTILITY UH-60L	H32361	+61	0				
TACTICAL FIRE TRUCK	H56391	+13	0				
GENERATOR SET,DIESEL ENGINE,30KW	J36383	+30	0				
GRADER,ROAD,MOTORIZED,FRONT WHEEL STEER	J74852	+1	0				
HELICOPTER,UTILITY UH-1H	K31795	+1	0				
HELICOPTER,UTILITY UH-60A	K32293	+22	0				
HOWITZER,M102,105MM,LT,TWD	K57392	+11	0				
INTERIOR BAY BRIDGE,FLOATING	K97376	+1	0				
LAUNCH,M60 TANK CHASSIS	L43664	+11	0				
MASK,CHEMICAL BIOLOGICAL M40	M12418	+11,368	0				
MASK,PROTECTIVE,COMBAT VEH M42	M18526	+48	0				
METEOROLOGICAL MEASURING SET/TMQ-41	M35941	+6	0				
MONOCULAR, NIGHT VISION, PVS-14	M79678	+3,410	0				
MACHINE GUN,7.62MM 240B	M92841	+5,403	0				
NIGHT VISION GOGGLES AN/PVS-5	N04456	+1,136	0				
NIGHT VISION SIGHT,CREW SERV WPN AN/TVS-5	N04596	+2,002	0				

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Table 6

**FY 2005 Planned vs Actual Procurements and Transfers**

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
NIGHT VISION DEVICE, AN/PVS-4 WMG	N04732	+1,638	0				
NIGHT VISION GOGGLES AN/PVS-7B	N05482	+19,485	0				
NAVIGATION SYSTEM, PSN-11	N95862	+3,335	0				
POSITION AZIMUTH DETECTION SYSTEM	P21220	+34	0				
RADIO SET AN/VRC-89A	R44863	+4	0				
RADIO SET AN/VRC-92A (SINGARS)	R45407	+10	0				
RECOVERY VEHICLE, FT, MDM M88A1	R50681	+24	0				
RADIO SET AN/VRC-87A (SINGARS)	R67160	+13	0				
RADIO SET AN/VRC-90A (SINGARS)	R67908	+16	0				
RADIO SET AN/VRC-91A (SINGARS)	R68010	+364	0				
RADIO SET AN/PRC-112	R82903	+468	0				
RADIO SET AN/VRC-119A (SINGARS)	R83005	+800	0				
RIFLE, 5.56 MM M16A2	R95035	+47	0				
SEMITRAILER, 22-1/2 TON M871	S70027	+482	0				
SEMITRAILER, FB, TRANSPORTR, 34T	S70159	+1,056	0				
SEMITRAILER, LOW BED, 40 TON, 6-WHL	S70594	+1	0				
SEMITRAILER, HVY EQUIP TRANS SYS, 70T (HETS)	S70859	+7	0				
TRUCK UTILITY CARGO/TROOP 1 1/4 TON M1097	T07679	+295	0				
TANK, COMBAT, 120MM M1A1 (ABRAMS)	T13168	+22	0				
TRUCK CARGO MTV M1084 W/MHE	T41203	+69	0				
TRAILER HEMAT M989A1 (MLRS)	T45465	+24	0				
TRUCK, TANKER, FUEL, 2500G WW (HEMTT)	T58161	+119	0				
TRUCK, TRACTOR, HEAVY EQUIP TRANS SYS (HETS)	T59048	+5	0				
TRUCK, CARGO, 4X4, LMTV M1078	T60081	+132	0				
TRUCK, TRACTOR M915	T61103	+130	0				
TRK 5 TON TRACTOR, FMTV M1088	T61239	+46	0				
TRUCK, UTILITY, 1-1/4 TON, M998 (HMMWV)	T61494	+2	0				
TRUCK CARGO MTV LWB M1085	T61704	+1	0				
TRUCK, CARGO, MTV M1083	T61908	+21	0				
TRUCK, WRECKER, M948E1, 8X8 (HEMTT)	T63093	+108	0				
TRUCK, TANKER, FUEL, 2500G (HEMTT)	T87243	+101	0				
TRUCK, TRACTOR, LET M916	T91656	+33	0				
TRUCK, UTILITY, 1-1/4 TON, M1025, ARM (HMMWV)	T92242	+299	0				
TRUCK, UTILITY, 1-1/4 TON, M1036, TOW (HMMWV)	T92310	+227	0				
TRUCK CARGO LMTV M1079	T93484	+20	0				

**FY 2005 Planned vs Actual Procurements and Transfers**

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
TRAILER,PALLETIZED LOAD SYSTEM (PLS)	T93761	+20	0				
TRUCK 5 TON WRECKER FMTV M1089	T94709	+18	0				
ROPU WATER PURIFICATION 3000 GPH	W47225	+7	0				
TRACTOR,FULL TRACKED,LOW SPEED	W76816	+58	0				
TRACTOR,FT,LS,DED,MED	W83529	+56	0				
TRUCK,CARGO,5T,DROP SIDE WW	X40931	+2	0				
TRUCK,DUMP,20T,12 CY M917	X44403	+19	0				
<b><u>FY 2005 P-1R EQUIPMENT</u></b>							
<b>MODIFICATION OF AIRCRAFT</b>							
CH-47 CARGO HELICOPTER MODS				85,000,000	0		
UTILITY/CARGO AIRPLANE MODS				10,093,000	10,046,000		
AIRCRAFT LONG RANGE MODS				754,000	750,000		
GATM ROLLUP				28,033,000	28,033,000		
<b>SUPPORT EQUIPMENT AND FACILITIES</b>							
AIR TRAFFIC CONTROL				23,280,000	0		
<b>OTHER MISSILES</b>							
JAVELIN (AAWS-M) SYSTEM				0	18,035,000		
MLRS LAUNCHER SYSTEMS				26,749,000	21,102,000		
HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS)				0	59,488,000		
<b>MODIFICATION OF MISSILES</b>							
MLRS MODS				1,310,000	0		
<b>SPARES AND REPAIR PARTS</b>							
SPARES AND REPAIR PARTS				1,305,000	0		
<b>WEAPONS AND OTHER COMBAT VEHICLES</b>							
XM107, CAL. 50, SNIPER RIFLE				2,988,000	2,988,000		
5.56 CARBINE M4				6,177,000	6,143,000		
MARK-19 MODIFICATIONS				199,000	0		
SQUAD AUTOMATIC WEAPON (MOD)				357,000	0		
<b>TACTICAL AND SUPPORT VEHICLES</b>							
SEMITRAILERS, FLATBED:				5,861,000	5,861,000		
HI MOB MULTI-PURP WHLD VEH (HMMWV)				113,387,000	113,387,000		
FAMILY OF MEDIUM TACTICAL VEH (FMTV)				128,574,000	128,574,000		
FAMILY OF HEAVY TACTICAL VEH (FHTV)				30,380,000	30,275,000		
<b>COMMUNICATIONS AND ELECTRONICS EQUIPMENT</b>							
SAT TERM, EMUT (SPACE)				700,000	0		

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Table 6

FY 2005 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE)				235,000	235,000		
ACUS MOD PROGRAM				6,038,000	0		
COMMS-ELEC EQUIP FIELDING				720,000	0		
TSEC - ARMY KEY MGT SYS (AKMS)				135,000	0		
TACTICAL UNMANNED AERIAL SYS (TUAS)				15,017,000	17,289,000		
ITEMS LESS THAN \$5.0M (TIARA)				3,324,000	4,886,000		
NIGHT VISION, THERMAL WPN SIGHT				1,370,000	0		
FORCE XXI BATTLE CMD BRIGADE & BELOW (FBCB2)				23,332,000	22,865,000		
TACTICAL OPERATIONS CENTERS				5,538,000	0		
FAAD C2				10,030,000	0		
JOINT NETWORK MANAGEMENT SYSTEM (JNMS)				1,092,000	0		
<b>OTHER SUPPORT EQUIPMENT</b>							
TACTICAL BRIDGING				9,937,000	9,937,000		
TACTICAL BRIDGE, FLOAT-RIBBON				16,396,000	16,396,000		
LIGHTWEIGHT MAINTENANCE ENCLOSURE (LME)				10,000	0		
FIELD FEEDING EQUIPMENT				3,435,000	3,435,000		
ITEMS LESS THAN \$5.0M (ENG SPT EQ)				58,000	58,000		
DISTRIBUTION SYSTEMS, PETROLEUM & WATER				8,134,000	8,134,000		
WATER PURIFICATION SYSTEMS				327,000	327,000		
COMBAT SUPPORT MEDICAL				197,000	197,000		
SHOP EQ CONTACT MAINTENANCE TRK MTD (MYP)				4,818,000	4,818,000		
GENERATORS AND ASSOCIATED EQUIP				11,406,000	11,406,000		
MODIFICATION OF IN-SVC EQUIPMENT (OPA-3)				50,000	0		
<b><u>FY 2005 NGREA EQUIPMENT</u></b>							
AN/PVS-14 NIGHT VISION GOGGLES						16,000,000	19,200,000
AN/PEQ-2 RIFLE ILLUMINATOR						2,671,950	2,671,950
AN/PAS-13 THERMAL WEAPON SIGHT						4,200,000	6,300,000
M4 CARBINE						9,100,000	14,177,000
M240B MACHINE GUN						3,400,000	5,371,000
HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) CONVOY TRAINER						2,320,000	2,320,000
HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) SHELTER, M1097/M1192						8,766,810	8,766,810

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Table 6

**FY 2005 Planned vs Actual Procurements and Transfers**

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) WEAPONS, M1151						8,300,000	11,952,000
HEAVY EXPANDED MOBILITY TACTICAL TRUCK (HEMTT) TANKER, M978						2,408,840	2,408,840
M917A2 DUMP TRUCK, 20 TON						6,450,000	6,379,000
SINGARS R/T 1523E RECEIVER/TRANSMITTER						10,000,000	10,000,000
AN/PRC-112 AIRCREW INDIVIDUAL RADIO						1,626,900	1,626,900
MOVEMENT TRACKING SYSTEM (MTS)						4,500,000	4,500,000
ADVANCED BRADLEY FULL-CREW INTERACTIVE SKILLS TRAINER (AB FIST)						4,400,000	4,400,000
DEPLOYABLE FORCE-ON-FORCE INSTRUMENTED RANGE SYSTEM (DFIRST)						3,850,000	3,850,000
ENGAGEMENT SKILLS TRAINER 2000 (EST 2000)						3,200,000	3,200,000
MOBILE CONDUCT-OF-FIRE TRAINER (MCOFT) XXI						3,437,500	3,437,500
<b>TOTAL</b>				<b>\$586,746,000</b>	<b>\$524,665,000</b>	<b>\$94,632,000</b>	<b>\$110,561,000</b>

## Major Item of Equipment Substitution List

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
AIRPLANE CARGO TRAN: C-12F	A30062	OTHER C-12 MODELS	MULTIPLE	11	X	
ALARM: CHEMICAL AGENT AUTOMATIC M22	A33020	ALARM CHEMICAL AGENT AUTOMATIC: PORTABLE MANPACK M8A1	A32355	4,116	X	
CARRIER AMMUNITION: TRACKED VEHICLE (CATV)	C10908	CARRIER CARGO: TRACKED 6 TON	D11049	8	X	
CARRIER ARMORED COMMAND POST: FULL TRACKED	C11158	CARRIER COMMAND POST: LIGHT TRACKED	D11538	162		X
CARRIER PERSONNEL FULL TRACKED: ARMORED (RISE), M113A3	C18234	CARRIER PERSONNEL FULL TRACKED: ARMORED, M113A2	D12087	1,200	X	
COMPUTER SET: DIGITAL OL 583/TYQ	C18514	COMPUTER SYSTEM: DIGITAL AN/TYQ 109(V)1	C27707	606	X	
DATA TRANSFER DEVICE: AN/CYZ 10	D78555	ELEC TRANSFER KEYING DEVICE ETKD: KYK 13/TSEC	E98103	2,153	X	
DATA TRANSFER DEVICE: AN/CYZ 10	D78555	NET CONTROL DEVICE NCD: KYX 15/TSEC	N02758	699	X	
INFANTRY FIGHTING VEHICLE M2A2	F40375	FIGHTING VEHICLE: FULL TRACKED CAVALRY HI SURVIVABILITY (CFV)	F60530	58	X	
INFANTRY FIGHTING VEHICLE M2A2	F40375	INFANTRY FIGHTING VEHICLE: M2	J81750	44	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST DSL ENG: 5KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35813	713	X	
GEN SET: DED SKID MTD 3KW 60HZ	G18358	GEN ST DSL ENG: SKID MTD 3KW 60 HZ AC 120/208V MEP 016B	G54041	1,029	X	
GEN SET: DED SKID MTD 3KW 60HZ	G18358	GEN ST DSL ENG: 5KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35813	373	X	
GENERATOR SET DIESEL ENGINE TM: PU 803	G35851	GEN ST DSL ENG TM: 30KW 60HZ MTD ON M 200A1 PU 406	J36383	145	X	
GEN SET DED TM: 10KW 60HZ MTD ONM116A2 PU 798	G42170	GEN ST DSL ENG TM: 10KW 60HZ MTD ON M116 PU 753/M	G40744	432	X	
GEN SET DED TM: 5KW 60HZ MTD ON M116A2 PU 797	G42238	GEN ST DSL ENG TM: 5KW 60HZ MTD ON M116 PU 751/M	G37273	385	X	
GEN SET DED TM: 5KW 60HZ MTD ON M116A2 PU 797	G42238	GEN ST DSL ENG TM: 10KW 60HZ MTD ON M116 PU 753/M	G40744	10	X	
GEN SET DED TM: 5KW 60HZ MTD ON M116A2 PU 797	G42238	GEN ST DSL ENG: 5KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35813	46	X	
GENERATOR SET DIESEL ENGINE TM: PU 802	G53778	GEN ST DSL ENG TM: 15KW 60HZ MTD ON M 200A1 PU 405	J35492	229	X	
GENERATOR SET DIESEL ENGINE TM: PU 802	G53778	GEN ST DSL ENG TM: 60KW 60HZ MTD ON M 200A1 PU 650	J35629	6	X	
GENERATOR SET DIESEL ENGINE TM: PU 802	G53778	GEN ST DSL ENG TM: 30KW 60HZ MTD ON M 200A1 PU 406	J36383	45	X	

## Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
GENERATOR SET: DIESEL TRL/MTD 60KW 50/60HZ PU805	G78306	GEN ST DSL ENG TM: 60KW 60HZ MTD ON M 200A1 PU 650	J35629	78	X	
HELICOPTER OBSERVATION: OH 58C	H31110	HELICOPTER OBSERVATION: OH 58A	K31042	89	X	
HELICOPTER UTILITY: UH 1V	H31872	HELICOPTER UTILITY: UH 1H	K31795	13	X	
HELICOPTER UTILITY: UH 60L	H32361	HELICOPTER UTILITY: UH 60A	K32293	115	X	
HF RADIO SET: AN/GRC 193A	H35404	RADIO SET: AN/GRC 106	Q32756	80	X	
MASK CHEMICAL BIOLOGICAL: M40	M12418	MASK CBR: PROTECTIVE FIELD	M11895	1,061	X	
MASK CHEMICAL BIOLOGICAL: M40	M12418	MASK CHEMICAL BIOLOGICAL: M45	M12736	124	X	
MACHINE GUN: LIGHT 5.56MM M249	M39263	MACHINE GUN 7.62 MILLIMETER: LIGHT M134	L92386	378	X	
MACHINE GUN: LIGHT 5.56MM M249	M39263	MACHINE GUN 5.56 MILLIMETER: M249	M09009	3,555	X	
MINI EYESAFE LASER INFRARED OBSERVATION SET (MELIOS): AN/PVS 6	M74849	LASER INFRARED OBSERVATION SET: AN/GVS 5	L40063	544	X	
MACHINE GUN: 7.62MM M240B	M92841	MACHINE GUN 7.62 MILLIMETER: LIGHT M134	L92386	257	X	
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS 5	N04596	NON-STANDARD LInS	MULTIPLE	712	X	
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS 5	N04596	NIGHT VISION SIGHT MINIATURIZED: AN/PVS 3	K08404	35	X	
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS 5	N04596	NIGHT VISION GOGGLES: AN/PVS 5	N04456	31		X
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS 5	N04596	NIGHT VISION SIGHT INDIVIDUAL SERVED WEAPON: AN/PVS 4	N04732	1,165	X	
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS 5	N04596	NIGHT VISION SIGHT TRIPOD MOUNTED: AN/TVS 4	N15518	151	X	
NIGHT VISION GOGGLE: AN/PVS 7B	N05482	MONOCULAR NIGHT VISION DEVICE: AN/PVS 14	M79678	7,048	X	
NIGHT VISION GOGGLE: AN/PVS 7B	N05482	NIGHT VISION GOGGLES: AN/PVS 5	N04456	25,989		X
NIGHT VISION GOGGLE: AN/PVS 7B	N05482	NIGHT VISION SIGHT INDIVIDUAL SERVED WEAPON: AN/PVS 4	N04732	1,049	X	
NAVIGATION SET: SATELLITE SIGNALS AN/PSN 13	N96248	NAVIGATION SET, SATELLITE SIGNALS AN/PSN 13(A)	FA2594	974	X	
PUMP CENTRF: GAS DRVN FRAME MTD 2 IN 125 GPM 50 FT HD	P92030	NON-STANDARD LInS	MULTIPLE	50	X	
RADAR SET: AN/TPQ 36(V)8	R14284	RADAR SET: AN/TPQ 36(V)1 & (V)7	MULTIPLE	6	X	
RADIO SET: AN/GRC 213	R30895	RADIO SET: AN/GRC 106	Q32756	103	X	
RADIO SET: AN/VRC 89F(C)	R44999	RADIO SET: AN/VRC 89D	R44931	81	X	
RADIO SET: AN/VRC 89F(C)	R44999	RADIO SET: AN/VRC 87C, 87D, 88A & 89A	MULTIPLE	876	X	
RECOVERY VEHICLE FULL TRACKED: HEAVY M88A2	R50885	RECOVERY VEHICLE FULL TRACKED: MEDIUM M88A1	R50681	20	X	
RADIO SET: AN/PRC 104A	R55200	RADIO SET: AN/PRC 70, 74 & 77	MULTIPLE	34	X	
RADIO SET: AN/VRC 87F(C)	R67296	RADIO SET: AN/VRC 87A, 87C & 87D	MULTIPLE	572	X	

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
RADIO SET: AN/VRC 88F(C)	R67330	RADIO SET: AN/VRC 87A, 88A, 88D	MULTIPLE	1,305	X	
RADIO SET: AN/VRC 90F(C)	R68044	RADIO SET: AN/VRC 90A	R67908	3,973	X	
RADIO SET: AN/VRC 91F(C)	R68146	RADIO SET: AN/VRC 91A	R68010	654	X	
RADIO SET: AN/PRC 112	R82903	RADIO SET: AN/PRC 90	Q38335	2,603	X	
RADIO SET: AN/PRC 119F(C)	R83141	RADIO SET: AN/PRC 119A	R83005	777	X	
RADIO SET: AN/PRC 119F(C)	R83141	RADIO SET: AN/PRC 119D	R83073	87	X	
RIFLE 5 56 MILLIMETER: M4	R97234	RIFLE: 5.56MM M16A2	R95035	39,493	X	
RIFLE 5 56 MILLIMETER: M4	R97234	RIFLE: 5.56MM M16A4	R97175	6,202	X	
SANITATION CENTER: FOOD	S33399	HEATER IMMERSION LIQUID FUEL FIRED: 34 3/4 IN LG OF HEATER	K25342	447	X	
KNIGHT: M707	S50205	CARRIER PERSONNEL FULL TRACKED: ARMORED FIRE SUPPORT	C12155	11	X	
SEMITRAILER FLAT BED: BREAKBULK/CONT TRANSPORTER 22 1/2 TON	S70027	SEMITRAILER LOW BED: 25 TON 4 WHEEL	S70517	176	X	
SEMITRAILER FLAT BED: BREAKBULK/CONT TRANSPORTER 22 1/2 TON	S70027	SEMITRAILER STAKE: 12 TON 4 WHEEL	S72024	171	X	
SEMITRAILER FLATBED: BREAKBULK/CONTAINER TRANSPORTER CMRCIAL 34T	S70159	SEMITRAILER LOW BED: 25 TON 4 WHEEL	S70517	21	X	
SEMITRAILER LOW BED: 40 TON 6 WHEEL	S70594	SEMITRAILER LOW BED: 25 TON 4 WHEEL	S70517	46	X	
SEMITRAILER TANK: PETROLEUM 7500GALLON BULK HAUL	S73119	SEMITRAILER TANK: 5000 GAL BULK HAUL SELF LOAD/UNLOAD	S10059	60	X	
SEMITRAILER TANK: 5000 GAL FUEL DISPENSING AUTOMOTIVE	S73372	SEMITRAILER TANK: 5000 GAL BULK HAUL SELF LOAD/UNLOAD	S10059	9	X	
SEMITRAILER TANK: 5000 GAL FUEL DISPENSING AUTOMOTIVE	S73372	SEMITRAILER TANK: FUEL 5000 GALLON 12 TON 4 WHEEL	S72846	15	X	
SEMITRAILER VAN: SUPPLY 12 TON 4 WHEEL	S75175	SEMITRAILER LOW BED: 25 TON 4 WHEEL	S70517	3	X	
SEMITRAILER VAN: SUPPLY 12 TON 4 WHEEL	S75175	SEMITRAILER STAKE: 12 TON 4 WHEEL	S72024	23	X	
SEMITRAILER VAN: SUPPLY 12 TON 4 WHEEL	S75175	SEMITRAILER VAN: CARGO 12 TON 4 WHEEL	S74079	46	X	
SEMITRAILER VAN: SUPPLY 12 TON 4 WHEEL	S75175	SEMITRAILER VAN: ELECTRONIC 3 6 TON 2 WHEEL 30 FT BODY	S74353	63	X	
SEMITRAILER VAN: SUPPLY 12 TON 4 WHEEL	S75175	SEMITRAILER VAN: EXPANSIBLE 6 TON 4 WHEEL (ARMY)	S74490	14	X	
TRUCK UTILITY: HEAVY VARIANT HMMWV, M1097	T07679	TRUCK UTILITY: S250 SHELTER CARRIER 4X4 (HMMWV)	T07543	1,377	X	
TRUCK UTILITY: HEAVY VARIANT HMMWV, M1097	T07679	TRUCK CARGO: 2 1/2 TON, M35 SERIES	X40009	93		X
TRUCK UTILITY: HEAVY VARIANT HMMWV, M1097	T07679	TRUCK CARGO: DROP SIDE 5 TON 6X6	X40794	5		X

## Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
SHOP EQUIP CONTACT MAINT TRK MTD:	T10138	SHOP SET CONTACT MAINTENANCE TRUCK MOUNTED: ENG	S30914	41	X	
SHOP EQUIP CONTACT MAINT TRK MTD:	T10138	SHOP EQUIPMENT GENERAL PURPOSE: TRUCK MOUNTED EOD	S31232	10	X	
SHOP EQUIP CONTACT MAINT TRK MTD:	T10138	TRUCK CARGO: TACTICAL 5/4 TON CUCV & M35 SERIES	MULTIPLE	7		X
TANK ASSEMBLY FABRIC COLLAPSIBLE: 20000 GAL PETROLEUM	T12620	NON-STANDARD LINS	MULTIPLE	28	X	
TANK ASSEMBLY FABRIC COLLAPSIBLE: 3000 GAL WATER	T19033	NON-STANDARD LINS	MULTIPLE	113	X	
TARGET ACQUISITION SYSTEM: TOW IMPROVED ITAS M41	T24690	LAUNCHER TUBULAR GUIDED MISSILE: (TOW)	L45740	182	X	
TRUCK CARGO: HEAVY PLS TRANSPORTER 15 16.5 TON 10X10	T40999	TRUCK CARGO: HEAVY PLS TRANSPORTER 15 16.5 TON 10X10 W/MHE	T41067	99	X	
TRUCK CARGO: MTV (LINS T41135 & T41203)	MULTIPLE	TRUCK CARGO: 5 TON 6X6, M54 SERIES	X40794	150		X
TRUCK CARGO: MTV W/MHE	T41203	TRUCK CARGO: 2 1/2 TON, M35 SERIES	X40009	6		X
TRUCK CARGO: 2 1/2 TON LMTV LAPES/AD (LINS T41995 & T42063)	MULTIPLE	TRUCK CARGO: 2 1/2 TON, M35 SERIES	MULTIPLE	63		X
TRUCK CARGO: 2 1/2 TON LMTV LAPES/AD (LINS T41036, T41995, T42063)	MULTIPLE	TRUCK CARGO: 5 TON M54 SERIES	X40794	21		X
TRUCK CARGO: 4X4 LMTV (LINS T60081 & T60149)	MULTIPLE	TRUCK CARGO: 2 1/2 TON 6X6, M35 SERIES	MULTIPLE	2,496		X
TRUCK CARGO: 4X4 LMTV (LINS T60081 & T60149)	MULTIPLE	TRUCK CARGO: 5 TON 6X6, M54 SERIES	MULTIPLE	517		X
TRUCK CARGO: 4X4 LMTV (LINS T60081 & T60149)	MULTIPLE	TRUCK CARGO: 5 TON 6X6 XLWB, M809 SERIES	MULTIPLE	29		X
TRUCK TRACTOR: MTV (LINS T61239 & T61307)	MULTIPLE	TRUCK TRACTOR: 5 TON 6X6, M54 SERIES	MULTIPLE	1,091		X
TRUCK UTILITY: CARGO/TROOP CARRIER, M998 (HMMWV)	T61494	TRUCK UTILITY: TACTICAL 3/4 TON, CUCV	MULTIPLE	3,070		X
TRUCK UTILITY: CARGO/TROOP CARRIER, M998 (HMMWV)	T61494	TRUCK UTILITY: TOW CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T05096	124		X
TRUCK UTILITY: CARGO/TROOP CARRIER, M998 (HMMWV)	T61494	TRUCK UTILITY: S250 SHELTER CARRIER 4X4 (HMMWV)	T07543	154	X	
TRUCK UTILITY: CARGO/TROOP CARRIER, M998 (HMMWV)	T61494	TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 W/W (HMMWV)	T61562	373	X	
TRUCK UTILITY: CARGO/TROOP CARRIER, M998 (HMMWV)	T61494	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T92242	294	X	
TRUCK UTILITY: CARGO/TROOP CARRIER, M998 (HMMWV)	T61494	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 W/W (HMMWV)	T92310	105	X	
TRUCK CARGO: MTV (LINS T61704 & T61908)	MULTIPLE	TRUCK CARGO: 2 1/2 TON 6X6, M35 SERIES	X40420	49		X

## Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
TRUCK CARGO: MTV (LINS T61704 & T61908)	MULTIPLE	TRUCK CARGO: DROP SIDE 5 TON 6X6, M54 SERIES	MULTIPLE	1,090		X
TRUCK CARGO: MTV (LINS T61704 & T61908)	MULTIPLE	TRUCK CARGO: 5 TON 6X6 XLWB, M809 SERIES	MULTIPLE	35		X
TRUCK WRECKER: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/WINCH	T63093	TRUCK WRECKER: 5 TON 6X6 W/WINCH	X63299	196		X
TRUCK DUMP: MTV (LINS T64911 & T64979)	MULTIPLE	TRUCK DUMP: 5 TON 6X6, M54 SERIES	X43708	1,128		X
TRUCK LIFT: FORK VARIABLE REACH ROUGH TERRAIN	T73347	TRUCK LIFT FORK: DED 6000 LB VARIABLE REACH RT AMMO HDLG	T48944	106	X	
TRUCK LIFT: FORK VARIABLE REACH ROUGH TERRAIN	T73347	TRUCK LIFT FORK: DSL DRVN 10000 LB CAP 48IN LD CTR ROUGH TERRAIN	T49119	41	X	
TRUCK TRACTOR: LET 6X6 66000 GVW W/W C/S	T91656	TRUCK TRACTOR: MET 8X6 75000 GVW W/W C/S	T61171	207	X	
TRUCK UTILITY: UP ARMORED HMMWV, M1114	T92446	TRUCK UTILITY: TACTICAL 3/4 TON, CUCV MODELS	T05028	48		X
TRUCK UTILITY: UP ARMORED HMMWV, M1114	T92446	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T92242	798	X	
TRUCK UTILITY: UP ARMORED HMMWV, M1114	T92446	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 W/W (HMMWV)	T92310	434	X	
TRUCK VAN: LMTV	T93484	TRUCK VAN: SHOP 2 1/2 TON 6X6, M35 SERIES	MULTIPLE	147		X
TRUCK WRECKER: MTV W/W	T94709	TRUCK WRECKER: 5 TON 6X6 W/WINCH, M54 SERIES	X63299	255		X
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	TRAILER FLATBED: 5 TON 4 WHEEL GENERAL PURPOSE	T96883	55	X	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	TRAILER AMMUNITION: 1 1/2 TON 2 WHEEL	W94030	56	X	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	TRAILER CARGO: 1 1/2 TON 2 WHEEL	W95811	43		X
TRAILER FLAT BED: M1082 TRLR CARGO LMTV W/DROPSIDES	T96564	TRAILER CARGO: 1 1/2 TON 2 WHEEL	W95811	778		X
TRAILER CARGO: 3/4 TON 2 WHEEL	W95537	TRAILER CARGO: 1 1/2 TON 2 WHEEL	W95811	103		X
TRUCK VAN: EXPANSIBLE 5 TON 6X6 (ARMY), M809 SERIES	X62237	TRUCK CARGO: 2 1/2 TON 6X6, M35 & M809 SERIES	X40146	47		X

### Significant Major Item Shortages

*NOTE: This table provides an RC top ten prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	High Mobility Multipurpose Wheeled Vehicle (HMMWV)	48,715	19,832	\$207,000	\$4,105,224,000	Projected UFR with modular transformation, SBE, and battle losses. Cost is the average of all variants.
2	Family of Medium Tactical Vehicles (FMTV)	37,995	30,140	\$190,000	\$5,726,600,000	Replaces obsolete 2 1/2 and 5 ton vehicles for mobilizations and modernization. Cost is the average of all variants.
3	Digital Enablers: MTS, STAMIS, Protection, CSS	35,143	30,175	\$28,417	\$857,478,000	Cost is average of all variants.
4	Army Battle Command System (ABCS) Suite of Systems: IMETS, DTSS, and BCS3	1,369	1,346	Various	\$190,110,000	
5	Night Vision Devices: Thermal Weapon Sights (AN/PAS-13), Driver Vehicle Enhancers (AN/VAS-5)	42,724	40,552	\$16,746	\$679,073,000	Cost is average of all models.
6	NBC Equipment: M22 & ICAM Chemical Agent Alarm Systems, and M17 Lightweight Decontamination System	32,591	26,665	\$11,028	\$294,070,000	Chemical Agent alarm systems. Man-portable and vehicle mounted. Critical for HLD/HLS and GWOT missions.
7	Heavy Expanded Mobility Tactical Truck (HEMTT): Wreckers, Tankers, & Load Handling Systems (LHS)	5,231	3,327	\$320,407	\$1,065,994,000	HEMTTs are still a critical shortfall for ARNG mobilizations. There are no substitutes for this capability.
8	Tactical Water Purification System (TWPS)	131	131	\$532,000	\$69,692,000	TWPS provides a mobile, tactical water purification capability critical to meet water support requirements.
9	Shadow 200 Tactical Unmanned Aerial Vehicle (TUAV)	34	32	\$15,200,000	\$486,400,000	TUAV provides reconnaissance, surveillance, target acquisition, and battle assessment.
10	Joint Network Nodes (JNN)	132	132	\$4,200,000	\$554,400,000	Critical to joint interoperability. Provides a high-speed, high-capacity network communications backbone.

### III. United States Army Reserve Overview

#### A. Current Status of the Army Reserve

##### 1. General Overview

As the United States Army enters the sixth year following the terrorist attacks of 9-11, the Army Reserve is in greater demand today than at any time since World War II. Although the Army Reserve remains decisively engaged with the Army in joint and expeditionary operations around the world, it faces several challenges in equipping: wartime losses, compatibility, modernization, and resources. It is becoming increasingly difficult for the Army Reserve to continue to provide ready forces in the near term due to worsening equipment shortages and lack of modernization.

##### **Top USAR Equipping Challenges**

- Limited New Equipment Procurement Funding
- Modernizing an Operational Army Reserve
- Sustainment of Equipment Exceeding Economical Useful Life

In response to the increased demands of the Army Reserve over the last six years, the Department of Defense has shifted the role of the Army Reserve from a strategic reserve to an operational reserve. As a result of this shift in roles, the demand on equipment and its usage have risen significantly in the last six years. In support of constant deployments, in FY 2007 the Army Reserve reported having only 66 percent of the required equipment on-hand. Required equipment is those items documented on the unit's MTOE and are necessary for a unit to go to war and successfully perform its mission.

With the heightened concern for domestic contingencies, the Army Reserve provides operational capabilities in the event of any domestic natural disaster or homeland security incident. Equipping Army Reserve units at 100 percent of the MTOE requirement is key to being prepared for these unpredictable contingencies. The Army Reserve makes up approximately 26 percent of the Army's CS and CSS force structure. Having the most modern lethal combat force being supported by obsolete and incompatible support equipment severely degrades readiness and significantly impacts deployment, logistics, and training requirements, but more importantly, degrades the effectiveness of support to the Army's combat forces.

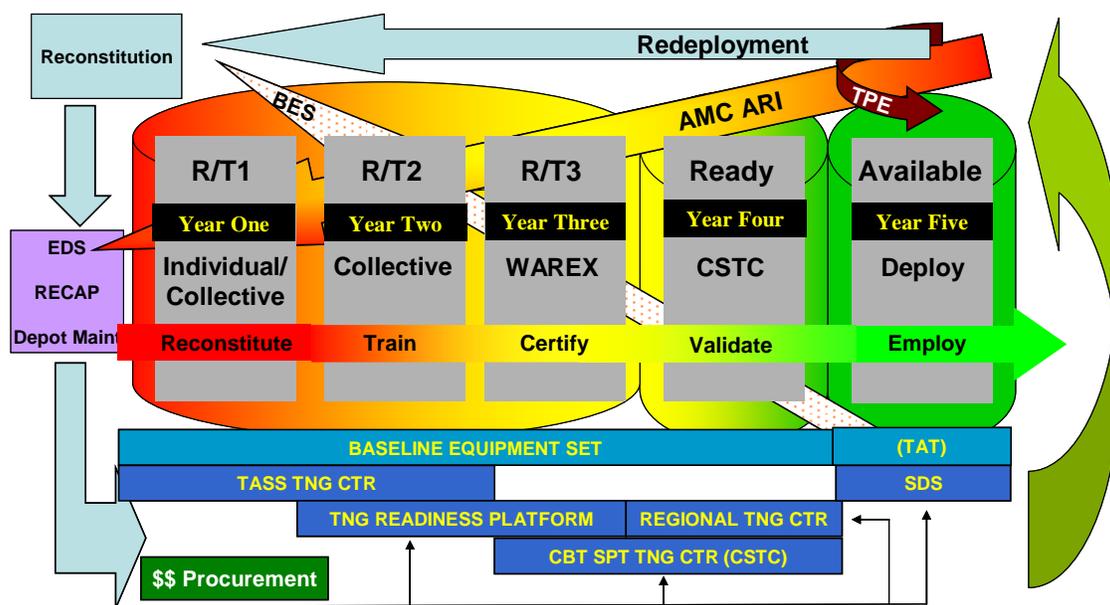
With only 66 percent of its required equipment on-hand, including substitutes, the Army Reserve's wartime equipment requirements were met by:

- TPE. This is equipment available to a unit upon arrival in the theater. However, TPE may be different from the equipment on which a unit received training on at the mobilization station.
- Cross-leveling of Equipment. Transfer and shipping thousands of pieces of equipment from non-mobilizing units to those units mobilizing is a maintenance and resource intensive process.
- New Army Procurements. This is equipment that was in the pipeline ready for fielding or moved up in the distribution process justified by an approved Operational Needs Statement (ONS)

While the above strategy equips deploying forces, the next deploying forces and the training base are left with minimal modernized equipment. The shortage of equipment on-hand, combined with the large amount of substitute items found in the Army Reserve's inventory, reduces the units' abilities to train in support of the modular Army and meet the requirements of the ARFORGEN model. The training base has become more important with the shift of emphasis from post-mobilization training to meeting deployment readiness objectives in the pre-mobilization phases.

The Army Reserve has been proactive in the management of personnel and equipment and devised its own strategies to *equip, train, and mobilize* that will complement the Army's ARFORGEN model. This is a paradigm shift from the obsolete strategy of *mobilize, train, and equip*. This strategy is the Army Reserve Fleet Management and Equipping Strategy (ARFMES). ARFMES provides the logistics capabilities to implement and sustain the Army Reserve Training Strategy (ARTS), and through ARTS, implement and sustain the ARFORGEN model. The objective of ARFMES is to align equipment and support operations with the level of resources at the required locations needed by units to achieve their training and readiness goals consistent with their position in the ARFORGEN model. Chart 2-4 graphically depicts this strategy.

Chart 2-4. ARFORGEN and the Army Reserve Fleet Management and Equipping Strategy



Now, more than ever, properly equipping units and training sites require attention, energy and innovation. The Army Reserve requires a steady flow of approximately \$1.6B dollars per year in funding to reach equipping and modernization goals. Without the right equipment available on time, we risk our Soldiers' abilities to accomplish their missions and jeopardize their survivability, safety and morale. We also place at risk, the rationale for the rotational readiness concept of the ARFORGEN model, severely degrading predictability. Units will be forced to conduct extensive post-mobilization training, delaying deployment to contingencies or face obstacles in mobilizing and deploying for HLD and domestic natural disasters. Continued

funding for the procurement of new equipment and the sustainment of existing equipment is essential to maintain a trained and ready force.

Meeting future obligations will require the Army Reserve to do much more than focus primarily on managing current resources. A continued high level of CS and CSS operations will require additional expenditures to compensate for the high level of activity in recent years on the Army Reserve’s older equipment, and the anticipated continuing equipment use in the near future. Additionally, the Army Reserve is positioned to support the Army’s transformation to a modular force. A modular AC combat force requires equipment compatibility with the support force provided by the Army Reserve, including tactical communications, weapons, vehicles, and battle command and control systems.

## 2. Status of Equipment

### a. Equipment On-Hand (EOH)

The equipment on-hand posture of the Army Reserve is 66 percent and continues to degrade due to attrition (battle loss, equipment service life depletion, and disposal of uneconomically repairable equipment), constant force structure changes, and the limited funding available for new equipment procurements, thus impacting equipment modernization.

This percentage represents equipment on-hand rather than actual modernization requirements. The equipment on-hand percentage includes substitute items which are authorized in accordance with regulatory guidance for reporting equipment. Approximately 16 percent of Army Reserve equipment is obsolete or incompatible with AC equipment. The Army Reserve continues to work with FORSCOM and HQDA to eliminate the use of equipment substitution with obsolete, incompatible, and non-deployable equipment.

Since the GWOT began, more than 40 percent of Army Reserve units have deployed out of sequence, a reality that has caused the Army Reserve to cross-level or redistribute assets internally. As shown in Chart 2-5 below, the Army Reserve cross-leveled approximately 235,900 items of equipment from September 2001 to April 2005 to compensate for having large quantities of substitutes and obsolete items.

*Chart 2-5. Equipment Transferred from Non-mobilizing Units to Mobilizing Units*



While the equipping challenges of the early deploying units were met, the continued operational support of OIF and OEF is placing additional strain on Army Reserve EOH and equipment

readiness (ER) status. Under resourcing, increased deployment readiness criteria, increased demand for critical but unauthorized equipment (e.g., night vision devices, M4 carbine rifles, crew served weapons, global positioning systems), the impact of the loss of the best and most modern equipment to TPE, and the incompatibility of older substitute items exacerbate the EOH situation. These factors directly impact the training and readiness of next deploying units.

#### **b. Theater Provided Equipment (TPE)**

The Army has evolved the Stay Behind Equipment (SBE) concept into the TPE program where equipment is transferred from donor units onto a Theater Property Book. The Army Reserve contributed over \$900M of equipment to TPE from 2005 to 2007, including high demand items such as trailers, generators, NVG, Palletized Load Systems, POL tankers, and all vehicles fitted with add-on armor. To properly track and document Army Reserve equipment transferred into the TPE pool, the Army Reserve deployed an accountability team into theater. The efforts of this team and the Army Reserve G4 resulted in the “payback” of \$900M in the FY 2007 Supplemental.

#### **c. Average Age of Major Items of Equipment**

The average age of equipment in the Army Reserve continues to increase and is depicted in *Table-2*. Major items of equipment continue to plague the Army Reserve as they near or pass their economic useful life. A few examples include the current light and light-medium tactical truck fleets, material handling and engineer equipment. Aging equipment causes operational and sustainment costs to increase while equipment serviceability rates decrease, thereby having a negative impact on unit readiness. The GWOT has shortened the military economic useful life of equipment roughly two to three times the peacetime rates, and the aging truck fleet is experiencing usage rates five to six times the peacetime rates. The increased operations tempo combined with combat losses is challenging the Army’s ability to sustain operational availability of equipment. Replacing, recapitalizing, and repairing existing Army equipment will compete with modernization efforts throughout the Army. Losses of major Army equipment items make it all the more important that Army equipment procurement programs remain fully funded and on track.

#### **d. Defense Support to Civil Authorities**

The Army Reserve is capable of rapid response and can deploy units and sustain critical disaster relief domestically and around the world. The Army Reserve’s defense support to civil authorities includes equipment such as trucks, tractors, material handling equipment, graders, loaders, trailers, and communications systems. Because the Army Reserve is a community-based force throughout the United States, much of this equipment is already pre-positioned and readily available for rapid deployment and support.

#### **e. Compatibility of Current Equipment with Active Component**

The extensive deployment of Army Reserve units over the last several years has highlighted the incompatibility issues and readiness reporting policy concerns. Actions initiated by the Army Reserve Command, in partnership with FORSCOM, have led to recent changes in the reporting of many substitute items of equipment that are obsolete, non-deployable or incompatible with modernized Active forces. Items such as non-deployable and non-supportable 800 and 900 series

tactical and cargo trucks, older protective masks, incompatible radio systems, and obsolete equipment are being removed as substitutes for readiness reporting.

Logistics automation compatibility is another key readiness issue for the Army Reserve. As units deploy for OEF and OIF, provide disaster relief and engage in training, compatible logistics automation systems are necessary for mission support, accountability, maintenance, and command and control. Some Army Reserve units have deployed with logistics automation equipment that proved incompatible in theater. The Army has a Life Cycle Replacement Program, which is not always funded. Consequently, the Army Reserve is left MTOE and logistics automation equipment that is incompatible with the AC.

#### **f. Equipment for Training**

The existence of TPE has, over time, reduced the amount of Army Reserve equipment being deployed to theater, but TPE has not reduced the need for equipment for pre-mobilization training. Without all units fully equipped and modernized to 100 percent of MTOE requirements, the Army Reserve does not have sufficient equipment to meet all the competing demands for equipment for additional contingencies, collective training exercises, individual skills training, home station battle training assemblies, and HLD/DSCA preparedness.

#### **g. Army Force Generation (ARFORGEN)**

Under the ARFORGEN model, the Army intends to provide every unit 100 percent of requirements on standard unit authorization documents as quickly as funding will allow. During the Bridging Phase, capability enhancement is achieved primarily through equipment maneuver. As the Army moves into the Objective Phase, capability enhancement will occur through equipment procurement. Unfortunately, due to wartime constraints, the Army cannot equip all units to 100 percent of the level required by their objective TOE. Consequently, the Army is in a bridging phase in which Army Reserve units receive equipment primarily through equipment maneuver, which includes re-use, repositioning, and some limited new equipment procurement. As the Army moves toward the Objective Phase, new procurement will reduce the need for equipment maneuver between units. In the ARFORGEN model, all equipment is considered Army equipment and will be positioned to best support the *National Military Strategy*. The Army may need to maneuver equipment between the AC and RC and will use existing guidance, such as DoD Directive (DoDD) 1225.6, *Equipping the Reserve Force*.

#### **h. Maintenance Issues**

##### **i. Field Level Maintenance**

The operational readiness rate in the Army Reserve is 94 percent for reportable equipment. This readiness level masks the reality, which is that readiness reporting applies to less than ten percent of all Army Reserve equipment. Readiness rates remain high because commanders place most of their managerial emphasis on maintaining readiness of their reportable equipment at the expense of everything else. Scheduled maintenance and services for 48 percent of all Army Reserve equipment was deferred in FY 2007 due to shortages of civilian and military maintenance technicians and increase in OPTEMPO.

Army Reserve maintenance activities, called Area Maintenance Support Activities (AMSA), were established to perform unit-level maintenance beyond the unit's capability to perform due to time restraints and required training. Average staffing for an AMSA is 10–12 personnel. Currently, AMSA shops are staffed at approximately 60 percent of requirements, and 25 percent of those are deployed in support of OIF and OEF. Simply stated, the Army Reserve is currently facing a 4.1 million maintenance-hour backlog. This translates into a \$400M shortfall. This situation is exasperated by the requirement for AMSA employees to be “dual status” Military Technicians, HQDA civilian employees, or Army Reserve Soldiers. Military Technicians are subject to unplanned mobilizations that reduce staff at a time of increasing demands. To mitigate the maintenance backlog, the USAR continues to develop programs to modernize, consolidate, and reduce the numbers of its facilities. This is accomplished by leveraging contractors and contracted maintenance support and commercially available services and practices. Contracted maintenance support and centralized training locations are major objectives under ARFMES and will require additional investments in new, modernized, and expanded maintenance and storage facilities. The current estimated cost of this construction and refurbishment program is \$500M.

In addition to AMSAs, the Army Reserve Equipment Concentration Sites (ECS) perform maintenance and provide storage capacity that augments the unit's requirement to store and maintain organic equipment at home station. To further reduce maintenance requirements and increase the service life of equipment, the Army Reserve placed unit equipment in Controlled Humidity Preservation (CHP) storage sites at strategic locations near ports of embarkation. This drastically reduces USAR maintenance costs and supports critical overseas training objectives of the USAR.

In support of OIF and OEF, the Army initiated the centralization of equipment at unit and individual training sites. These sites support unit training at TRP and individual training at The Army School System (TASS) Training Centers (TTCs). The equipment consists of major end items; equipment normally shipped to and from training sites and home station, and is positioned at numerous installations CONUS-wide to maintain the proficiency of units between deployment rotations. This is another financial burden that substantially increases use of RC resources without augmentation to meet mission requirements and increases the OPTEMPO of this equipment from low usage services back into the mainstream full services requirements. Staffing levels in the USAR are based on occasional use and reduced service requirements and OPTEMPO program budgets. This is no longer the case. USAR equipment is being absorbed into the mainstream and no longer qualifies for reduced maintenance levels. The required services to meet this demanding schedule double our resource requirements. USAR maintenance OPTEMPO has been reduced by 50 percent since FY 2005.

## **ii. National Level Maintenance**

In order to sustain the current pace of military operations in Iraq and Afghanistan, the Army Reserve must continuously repair, rebuild, and replace equipment worn out or destroyed by the war effort, a process known as Army Reset. Army Reset is designed to keep up with the restoration or replacement of equipment as units rotate out of Iraq. The Army Reserve is currently receiving sufficient resources and support from the Army to meet the 365-day period for Reset of Army Reserve units. The primary issue is the timely replacement of equipment

inducted into national level maintenance during Reset. The loss of such equipment adversely impacts pre-mobilization training and the support of the ARFORGEN model.

Continuing its partnership with industry, the Army Reserve is working to infuse commercial concepts into CS and CSS improvement initiatives. This will allow the Army Reserve to use commercial industry for the manufacture of CS and CSS equipment and follow-on rebuild or overhaul. The Army Reserve understands the need to optimize all equipment funding sources and encourages the Army to design equipment with the intent to remanufacture. All new equipment procurements should include both prognostics, as well as diagnostics, as part of its design and manufacture.

The Army Reserve relies on limited overhaul and rebuild programs of existing equipment to retain mission capabilities. Upgrading existing equipment, through rebuild initiatives and depot maintenance programs, is the Army Reserve's only method to extend the service life of aging equipment.

### **iii. Sustainment Initiatives**

The following initiatives are examples of how the Army Reserve has partnered with industry to design and implement total rebuild and refurbishment programs.

The M878/M878A1, 5-ton tractor (LIN T60353) is designed for terminal yard operations such as spotting and moving trailers. The Army Reserve requires 131 M878 Tractors and has 84 on-hand. Ottawa Truck, the original manufacturer, conducted a proof of principle to install a new cab, controls, instrumentation, and wiring on the older model of tractor (1978), which will extend the projected service life. The Army Reserve rebuilt thirty of the fleet's M878s in FY 2002 and FY 2003 at Red River Army Depot. There are 3 additional tractors scheduled for rebuild in FY 2008.



*M878/M878A1 5-Ton Tractor*

There are three models of the 4,000-lb forklift (LIN T49255), the Material Handling Equipment (MHE)-237, MHE-270 and MHE-271 forklifts. The MHE-237 forklift was manufactured between 1981 and 1983 and already exceeds its expected 15-year economic useful life. The other models were manufactured between 1995 and 1996. The Army Reserve requirement is 726 forklifts and has 670 on-hand. It is not likely that additional MHE-237s will be cascaded to the Army Reserve. Consequently, a shortfall of about 82 4,000-lb. forklifts is projected through FY 2006. The Army Reserve has initiated a proof of principle partial overhaul of one MHE-237 forklift to determine the economic feasibility of the program, to document overhaul procedures, and to assess the most cost effective method of sustaining the 4,000-lb forklifts in the future. Between FY 2002 and 2007, the Army Reserve has rebuilt 397 of the older MHE-237 model. The completion of this rebuild program is expected by FY 2010.



*4,000-LB Truck, Forklift*

The 10,000-lb. forklift (LIN T49119) has a capacity of 10,000 pounds, a 48-inch load center, and can lift a load to a maximum of 121.6 inches. It has an estimated useful life of 15 years. There are 423 of these forklifts on-hand in the Army Reserve. The forklift was manufactured and fielded from 1979 to 1985 and is past its expected 15-year life span. The All Terrain Lifter Army System (ATLAS) replaces this forklift. The Army Reserve requirement for the ATLAS forklift is 972 and 452 are on hand. Consequently, all of the older 10,000-lb forklifts will be retained to meet requirements. The Army Reserve rebuilt 94 10,000-lb. forklifts between FY 2004 and 2007, and the remainder will be overhauled between FY 2008 and FY 2009.



**10,000-LB Truck, Forklift**

The Army Reserve was authorized 2,548 M915A3, Truck Tractors, in FY 2007 and currently has 421 of the A3 models on-hand. The M915A1 truck, in its current configuration, does not meet the requirements for modularity and deployment. M915 tractors are fitted with “glider” kits by Freightliner and by Army Reserve maintenance units and facilities. The overhauled tractors receive technical insertions that upgrade their capabilities and provide service life extensions, reduced life cycle costs, and improved safety capabilities. The “new” tractor is designated as a M915A4 model. The Army Reserve built 336 through the end of FY 2006 of which 184 were retained in theater. The rest of the M915 fleet is programmed for overhaul by FY 2010. With the overhaul of these assets, the Army Reserve would be capable of equipping some Army Reserve units with a more reliable and ready asset for mobilized units.



**M915A4 Glider  
Truck Tractor**

**i. Modernization Programs and Shortfalls**

Listed below are the Army Reserve’s top five modernization shortages, which are also listed in *Table 8*. These systems have unfunded requirements that are not currently projected to be filled through normal Army procurement projections.

The Family of Medium Tactical Vehicles (FMTV) is a key logistics enabler and reduces the Army’s logistical footprint by providing commonality of parts and components, reduced



**Light Medium Tactical Vehicles  
(LMTV)**

maintenance downtime, and lower operating and support costs than older trucks. It replaces maintenance-intensive trucks currently in the medium tactical vehicle fleet. Typical missions include line haul, local haul, unit mobility, unit resupply, and other missions in the combat, CS, and CSS roles. The LMTV and MTV consist of a common truck



**Medium Tactical Vehicles  
(MTV)**

chassis that is used for several vehicle configurations in two payload classes of 2½ and 5 tons. The Army Reserve has a projected total unfunded requirement of 143 LMTVs and 7,273 MTVs

at a cost of \$153,000 and \$183,000 each, respectively. FMTVs are one of the Army Reserve's highest equipment priorities.



*Truck Tractor Line Haul (M915)*

The Truck Tractor Line Haul (M915) and Truck Tractor Light Equipment Transport (M916) provide a common light tactical vehicle capability in a wide variety of environments. The M915 and M916 tractors operate on established road networks to provide U.S. Forces with the most efficient means of bulk transport for equipment and supplies. Transportation and engineer units use these tractors primarily in resupply operations from ocean ports to the division support area. These tractors transport general bulk cargo, cargo containers, and fuel on companion semitrailers and has the characteristics similar to heavy commercial highway transporter tractors. The total Army Reserve unfunded requirements are 1,121 for the M915 and 800 for the M916 at a cost of \$165,000 each.



*Armored Security Vehicle (ASV)*

The Armored Security Vehicle (ASV) is an armored wheeled vehicle equipped with a turret and armament system designed to meet the security mission requirements of the Military Police Corps. It is a light-armored, all wheeled vehicle that provides increased ballistic and landmine protection to the MPs. The ASV meets the stringent requirements for deployability, reliability, and crew maintainability demanded by the Army/Air Force Joint Operational Requirements Document. The ASV offers exceptional crew protection through the employment of a modular expandable armor system that consists of ceramic composite appliqué on the exterior surfaces and spall liner on the interior. The total Army Reserve unfunded requirement is 156 ASVs at \$810,000 each.

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## **j. Overall Equipment Readiness**

Through the DARPL, priority for new equipment distribution was given to units scheduled for deployment. Through the DARPL process, along with the massive cross-leveling of internal assets by the Army Reserve, deploying Soldiers are going to war with the most modern equipment available. However, this process degrades the readiness of non-mobilized Army Reserve units, and massive cross-leveling and current shortages impede the Army Reserve's ability to prepare forces for future deployments.



*Truck Tractor Light Equipment Transport (M916)*

To meet equipment readiness standards, the Army Reserve often substitutes equipment that does the same job, but typically requires training, maintenance, and repair parts that differ from the actual items listed on unit requirements documents. For example, the Army Reserve continues to substitute 1970s vintage 2½-ton trucks in place of more modern light medium tactical vehicles.

Another challenge that the Army Reserve faces is the lower priority given to CS and CSS equipment such as trucks, trailers, communications and medical systems that are to be developed

or procured under the Army's modernization program. As a result, the Army Reserve receives limited amounts of modernized equipment, further aggravating the equipping situation.

Until the Army Reserve is fully equipped with modern items, it is increasingly important that we take care of what is on-hand. Sustaining on-hand equipment requires full funding of operations and maintenance accounts and the continuing support of the Army's depot maintenance program. These resources are essential to extending service life, reducing life-cycle costs, and improving safety for Army Reserve Soldiers.

NGREA funding has been vital in the effort to improve Army Reserve equipping. Over the past five years, NGREA funding has been used to address some critical shortfalls. During that time, the Army Reserve has received an average of \$46M annually to procure additional end items that the Army has been unable to furnish through the normal budget process.

The following equipment was purchased with NGREA funds during FY 2005 for delivery in future fiscal years:

- Handheld Standoff Mine Detector, AN/PSS-14–179 each.
- Squad Automatic Weapon (SAW)–1290 each.
- M4 Carbine Rifle–1081 each.
- High Frequency Radio, AN/PRC-150–301 each.
- Night Vision Devices–252 each.
- Movement Tracking System–174 each.
- Phoenix Terminal–1 each.
- Generator Sets–41 each.
- Semitrailer Flatbed, M871A3–84 each.
- Truck Tractor, M915A3–40 each.

#### **k. Other Equipment Specific Issues**

Major items of equipment projected for receipt by the Army Reserve in FY 2008–2009 and beyond as a result of Army P-1R, NGREA, or modification/rebuild programs include:

- Night Vision Devices
- Tactical Trailers/Dolly Sets
- Generators and Associated Equipment
- High Mobility Multi-Purpose Wheeled Vehicles
- Rough Terrain Container Handlers
- Counter Intelligence HUMINT Information Management Systems
- M4 Carbine Rifles
- Container Handling Units
- Palletized Load Systems
- Defense Advanced Global Positioning Receiver

- Hydraulic Excavators
- Family of Medium Tactical Vehicles
- All Terrain Lifting Army Systems
- Armored Security Vehicles
- Truck Tractor, Line Haul (M915/M916)
- High Mobility Engineer Excavators
- Maneuver Control Systems
- Battle Command Sustainment Support Systems
- Semitrailer 34T, M872A4
- Trailer, Cargo, FMTV Dropside
- Chemical Agent Alarms and Monitors
- Machine Guns, 40mm MK-19 and 50cal M2 & M3 Mounts
- Computer Systems, AN/UYQ-90 MTS
- Shop Equipment, Contact Maintenance Trucks
- Thermal Weapon Sights
- C4I for Landing Craft Utility 2000 Vessels.

## **B. Changes Since Last NGRER**

The Army's equipment resourcing priority is to the BCTs. Consequently, the Army Reserve was under-resourced in the FY 2008–2013 POM. For FY 2006 and 2007, the Army Reserve relied heavily upon TPE, supplemental funding, and equipment distributions from the Army Equipment and Re-use Conferences (AERC). AERC 7.0 was conducted in July 2007 and effectively and efficiently allocated all available Army equipment in the inventory, whether from new production or already existing equipment, to distribute to deploying units based on the DARPL prioritization. The Army Reserve is projected to receive approximately \$5B worth of equipment for deploying forces in FY 2008 and 2009. The Army Reserve has implemented ARFMES. As a result, the minimum essential equipment for training is positioned at the units' home stations, and the remaining equipment is divided among the centrally managed individual and collective training sites. The intent of this strategy is to maximize the use of the limited modernized equipment to provide trained and ready Soldiers.

## **C. Future Years Program (FY 2009–FY 2011)**

### **1. FY 2011 Equipment Requirements**

Previously identified modernization shortfalls continue through FY 2011.

### **2. Anticipated New Equipment Procurements**

*Table 3* reflects the planned Service procurements from P-1R data.

### **3. Anticipated Transfer from AC to RC**

*Table 5* reflects data regarding equipment transfers from AC to the RC.

### **4. Anticipated Withdrawals from RC Inventory**

*Table 5* reflects Army Reserve projected equipment transfer and withdrawal quantities.

## 5. Equipment Shortages and Modernization Shortfalls at the end of FY 2011

The Army Reserve is projected to have continued shortfalls for the equipment listed below:

- FMTV, including both the LMTV and MTV
- Truck Tractor, Line Haul (M915/M916)
- Armored Security Vehicle (ASV)
- Logistics Automation Systems (SAMS-E, CAISI, VSAT, PBUSE)
- High Frequency Radios
- Movement Tracking System (MTS)
- Multi-Band Super High Frequency Terminal (Phoenix), Joint Network Node.

### D. Summary

Modernization and interoperability of the Army Reserve are essential to readiness and relevance. The Army's transformation to a modular "plug and play" force has been referred to as the largest Army reorganization in 50 years. It encompasses the Army's total force, AC, ARNG, and Army Reserve, and directly affects not only Army combat units, but also the CS and CSS forces. Modularity is just the beginning to a never ending task of transforming the Army, and for the first time in history, the Army has included the RC as full and equal partners in the transformation process. However, the goal of total integration is impossible unless the Army Reserve is funded commensurate to its role as an operational force. The Army Reserve has made significant contributions to ongoing military operations, but equipment shortages continue to increase, and, if not addressed, may hamper future preparedness for missions, both foreign and domestic.

The Army Reserve must be equipped to leverage the full potential of all its force structure and the Soldiers that are the centerpiece, not just those likely to deploy first. The Army Reserve is no longer a *strategic* reserve; it is a complementary, *operational* force. The Army Reserve relies heavily on NGREA and Congressional Add funding to offset shortages in the Army's new equipment procurement programs. It is an invaluable tool, making resources beyond the President's budget available to the Army Reserve and offers the most flexible and direct method for the Army Reserve of procuring modern CS and CSS equipment. It also enhances equipment interoperability with the AC through modernization while increasing equipment on-hand readiness percentages.

Today's Army Reserve hardly resembles the Army Reserve of the Cold War era, which was—by design—a principal element of the Nation's strategic reserve. Today, the AC is less than 40 percent of its size 35 years ago, and the sustained high operational demand for volunteer Soldiers is unprecedented. By necessity, the Army Reserve has become an integral part of the deployed operational force. However, transforming the Army Reserve to become part of the operational force requires the Army to change the way the Army Reserve is organized, resourced, and equipped. Today's dangerous and uncertain strategic environment demands that

all units are maintained and equipped at a high state of combat readiness and prepared to rapidly deploy as part of the total force. The Army Reserve is an accessible and integral full partner of the Army....it is in the Nation's interest to provide American Soldiers the best and most modern equipment.

### **Future State: An Operational Army Reserve**



*Skilled Soldiers and modern equipment—Army Strong—trained and ready—to go anywhere!*

USAR

Table 1

**Consolidated Major Item Inventory and Requirements**

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
<b>ROTARY WING AIRCRAFT</b>							
HELICOPTER, ATTACK AH-64D (APACHE)	H48918	\$25,128,800	6	6	18	18	48
HELICOPTER, CARGO CH-47D (CHINOOK)	H30517	\$5,000,000	40	42	42	50	60
HELICOPTER, UTILITY UH-60L/Q (BLACK HAWK)	H32361	\$4,855,000	20	23	23	23	40
<b>FIXED WING AIRCRAFT</b>							
AIRPLANE, CARGO, TRANSPORT, C-12R	A30062	\$3,068,422	11	11	11	11	0
AIRPLANE, CARGO, TRANSPORT, UC-35	Z95382	\$3,922,313	9	9	9	9	16
<b>BRIDGE &amp; VESSEL EQUIPMENT</b>							
LOGISTIC SUPPORT VESSEL	V00426	\$26,748,800	3	3	3	3	3
LANDING CRAFT MECHANIZED, LCM-8	L36739	\$174,650	15	15	15	15	11
LANDING CRAFT UTILITY, LCU-2000	L36989	\$5,000,000	7	7	7	7	7
TUG, LARGE COASTAL & INLAND WATERWAY	T68330	\$12,500,000	2	3	3	3	3
INTERIOR BAY BRIDGE, FLOATING	K97376	\$62,910	248	248	248	248	212
RAMP BAY, FLOATING BRIDGE	R10527	\$70,575	97	97	97	97	86
RAMP LOADING VEHICLE	R11154	\$7,229	192	192	192	192	161
TRANSPORTER, FLOATING BRIDGE	X23277	\$102,218	10	10	10	10	4
BRIDGE ERECTION SET, FIXED BRIDGE, 97CLE53	C22126	\$488,354	5	5	5	5	7
BRIDGE, FIXED HIGHWAY, MILB11844	C23017	\$303,673	1	1	1	1	1
BRIDGE ERECTION SET, FIXED BRIDGE, 97CLE52	C22811	\$964,515	10	10	10	10	13
<b>CHEMICAL DEFENSIVE EQUIPMENT</b>							
CHEMICAL AGENT ALARM, M8A1	A32355	\$8,432	4,501	4,506	4,506	4,506	276
CHEMICAL AGENT MONITOR, IMPROVED (ICAM)	C05701	\$7,500	4,743	4,881	4,995	4,999	5,677
COLLECTIVE PROTECTION EQUIPMENT, NBC, M20	C79000	\$18,391	123	123	127	127	824
DECONTAMINATING APPARATUS, M17	D82404	\$23,121	587	722	722	722	778
DECONTAMINATING APPARATUS, M12	F81880	\$30,968	18	57	62	62	91
MASK, PROTECTIVE, COMBAT VEHICLE, M42	M18526	\$640	1,721	1,721	1,721	1,721	10
MASK, CHEMICAL-BIOLOGICAL, M40	M12418	\$202	169,756	170,746	171,086	171,086	115,772
MASK, CBR PROTECTIVE FIELD, M17A1	M11895	\$93	313	455	455	455	4,470
RADIAC SET, AN/PDR-75	R30925	\$2,978	772	1,091	1,256	1,256	1,518
RADIAC SET, AN/UDR-13	R31061	\$631	3,622	5,203	8,930	8,930	9,875
RADIACMETER, IM-93A/UD	Q20935	\$73	3,147	3,151	3,151	3,151	626
SMOKE GENERATOR, M157	G51840	\$26,622	83	83	83	83	0
SMOKE GENERATOR, M56	G58151	\$145,000	233	233	233	233	0
SMOKE GENERATOR, M58	G87229	\$410,000	21	21	21	21	0
MOUNTING KIT, SMOKE GENERATOR, M284	M17931	\$3,183	88	88	88	88	25
<b>COMMUNICATIONS EQUIPMENT</b>							
CENTRAL OFFICE COMM, AN/TTC-39A(V)1	C41311	\$2,801,000	1	1	1	1	1

**USAR**

Table 1

**Consolidated Major Item Inventory and Requirements**

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Unit Cost</b>	<b>Begin FY 2009 QTY O/H</b>	<b>Begin FY 2010 QTY O/H</b>	<b>Begin FY 2011 QTY O/H</b>	<b>End FY 2011 QTY O/H</b>	<b>End FY 2011 QTY REQ</b>
DATA TRANSFER DEVICE, AN/CYZ-10	D78555	\$1,899	7,443	7,628	7,628	7,628	33
RADAR SIGNAL DETECTION SET, AN/APR-39A(V)1	D03159	\$49,272	109	109	111	111	196
RADIO SET, AN/GRC-106	Q32756	\$18,602	226	226	226	226	0
RADIO SET, AN/GRC-193A	H35404	\$37,000	158	176	176	176	997
RADIO SET, AN/GRC-213	R30895	\$20,000	91	91	91	91	0
RADIO SET, AN/PRC-104A	R55200	\$12,500	21	21	21	21	0
RADIO SET, SINCGARS AN/VRC-90A	R67908	\$13,178	4,999	4,999	4,999	4,999	4
RADIO SET, SINCGARS AN/VRC-91A	R68010	\$23,249	867	867	867	867	0
RADIO SET, SINCGARS AN/VRC-92A	R45407	\$21,238	477	477	477	477	25
RADIO SET, SINCGARS AN/VRC-119A	R83005	\$10,117	1,337	1,337	1,337	1,337	32
RADIO SET, SINCGARS AN/VRC-87A	R67160	\$12,109	245	245	245	245	0
RADIO SET, SINCGARS AN/VRC-88A	R67194	\$12,519	2,050	2,050	2,050	2,050	0
RADIO SET, SINCGARS AN/VRC-89A	R44863	\$22,822	1,364	1,364	1,364	1,364	0
RADIO TERMINAL SET, AN/TRC-170 (V)2	R92967	\$2,000,000	21	21	21	21	3
RADIO TERMINAL SET, AN/TRC-170 (V)3	R93035	\$1,000,000	13	13	13	13	20
SPEECH SECURITY EQUIPMENT, TSEC/KY-57	S01373	\$1,930	399	482	482	482	383
SPEECH SECURITY EQUIPMENT, TSEC/KY-58	S01441	\$3,063	247	247	247	247	137
TELEPHONE, DIGITAL NON-SECURE, TA-1035/U	T45408	\$2,459	2,202	2,202	2,202	2,202	0
RADIO TERMINAL, TELEPHONE, AN/VRC-97	T55957	\$110,000	726	981	982	982	637
FACSIMILE, LIGHTWEIGHT DIGITAL, AN/UXC-7	L67964	\$21,972	723	725	725	725	175
ELECTRONIC TRANSFER KEYING DEVICE, KYK-13	E98103	\$235	2,823	2,829	2,831	2,831	221
DIGITAL DATA GENERATOR, SG-1139/G	D37041	\$5,100	78	78	78	78	55
NET CONTROL DEVICE, KYX-15/TSEC	N02758	\$2,300	1,236	1,236	1,236	1,236	71
SPECTRUM ANALYZER, AN/USM-489(V)1	S01416	\$37,378	6	8	8	8	16
<b>CONSTRUCTION EQUIPMENT</b>							
ASPHALT MIXING PLANT	M57048	\$1,254,600	5	5	5	5	7
COMPACTOR, HIGH SPEED, SELF-PROPELLED, CCE	E61618	\$135,186	49	49	50	50	50
CRANE, 20-TON, WHL-MTD	F39378	\$162,393	1	1	1	1	18
CRANE, 7.5-TON, WHL-MTD	C36151	\$58,481	53	54	54	54	23
CRANE, 25-TON, WHL-MTD, ATEC AT422T	C36586	\$226,341	115	115	115	115	83
CRANE, WHL-MTD, ROUGH TERRAIN (RTCC)	C39398	\$450,194	76	76	76	76	38
CRANE-SHOVEL, CRAWLER MOUNTED, 50-TON	F40474	\$270,000	3	3	3	3	0
CRANE, 25-TON, TRK-MTD, CCE	F43429	\$160,953	25	25	25	25	8
CRUSHING, SCREENING, & WASHING PLANT, 150 TPH	F49673	\$1,543,579	6	6	6	6	0
ROAD GRADER, MOTORIZED, CCE	G74783	\$67,724	207	213	213	213	120
ROAD GRADER, MOTORIZED	J74920	\$62,181	2	2	2	2	0
SCOOP LOADER, CCE	L76321	\$75,450	38	38	39	39	64
SCOOP LOADER, 950BNS	L76556	\$58,890	138	141	141	141	33
SCRAPER EARTH MOVING SP, 14-18 CU YD	S56246	\$120,410	207	207	207	207	200
SPREADER LIFT FRT CON	U12203	\$4,490	96	96	96	96	36
TRACTOR, WHLD EXCAVATOR, SEE	T34437	\$110,000	305	308	320	320	335
<b>ELECTRICAL GENERATION</b>							
GENERATOR SET, TRAILER MOUNTED, PU-798	G42170	\$13,000	302	304	320	320	501

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
GENERATOR SET, TRAILER MOUNTED, PU-406	J36383	\$20,810	95	95	95	95	11
GENERATOR SET, MEP-002A	J35813	\$8,332	1,122	1,122	1,122	1,122	226
GENERATOR SET, MEP-003A	J35825	\$13,635	432	432	432	432	38
GENERATOR SET, MEP-805A	G74575	\$26,705	114	114	114	114	111
GENERATOR SET, MEP-806A	G12034	\$25,073	83	83	83	83	47
GENERATOR SET, MEP-802A	G11966	\$12,798	1,155	1,157	1,406	2,797	2,497
GENERATOR SET, MEP-803A	G74711	\$14,345	389	522	552	552	982
GENERATOR SET, MEP-804A	G12170	\$16,160	134	135	135	135	217
GENERATOR SET, MEP-009A	J40158	\$49,440	7	7	7	7	0
GENERATOR SET, MEP-016A	J45699	\$4,491	250	250	250	250	0
GENERATOR SET, MEP-108A	J40150	\$19,204	0	0	0	0	2
GENERATOR SET, TRAILER MOUNTED, PU-803	G35851	\$28,521	78	100	100	100	180
GENERATOR SET, TRAILER MOUNTED, PU-802	G53778	\$19,080	154	157	157	157	525
GENERATOR SET, TRAILER MOUNTED, PU-805	G78306	\$31,596	29	46	46	46	56
POWER PLANT, AN/MJQ-36	P28151	\$33,627	6	6	6	6	1
POWER PLANT, AN/MJQ-35	P28083	\$11,000	16	16	18	18	16
POWER PLANT, AN/MJQ-10	P27819	\$45,447	22	22	22	22	9
POWER PLANT, AN/MJQ-40	P42126	\$63,941	23	23	23	23	10
POWER PLANT, AN/MJQ-41	P42194	\$70,891	2	8	11	13	10
POWER PLANT, AN/NJQ-37	P42262	\$36,558	99	100	100	100	18
POWER SUPPLY, PP-6224/U	P40750	\$1,491	1,256	1,257	1,257	1,257	3,930
<b>MEDICAL EQUIPMENT</b>							
ANESTHESIA APPARATUS	A62773	\$19,679	63	63	63	63	8
COMBAT AUTOMATED SERVICE SUPPORT-MEDICAL (CASS-M) COMPUTER SYSTEM	C18514	\$5,000	988	988	988	988	0
DEFIBRILLATOR MONITOR RECORDER	D86072	\$31,885	144	163	203	206	348
MEDICAL EQUIPMENT SET, FIELD SICK CALL	M30156	\$15,000	58	79	79	79	125
MEDICAL EQUIPMENT SET, FIELD TRAUMA	M30499	\$45,000	76	97	97	97	114
MEDICAL MATERIEL SET, CENTRAL MATERIAL SERVICE, DEPMEDS	M08417	\$736,613	38	38	42	42	64
MEDICAL MATERIEL SET, INTERMEDIATE CARE WARD, DEPMEDS	M08599	\$188,217	45	45	45	45	198
MEDICAL MATERIEL SET, LABORATORY GENERAL, DEPMEDS	M72482	\$200,320	1	1	1	1	0
MEDICAL MATERIEL SET, OPERATING ROOM, DEPMEDS	M72936	\$485,839	35	35	39	39	64
MEDICAL MATERIEL SET, POST-OP/ICU WARD, DEPMEDS	M09576	\$331,047	41	41	49	49	92
MEDICAL MATERIEL SET, X-RAY, DEPMEDS	M72300	\$281,240	3	3	4	4	21
MEDICAL MATERIEL SET, X-RAY RADIOGRAPHIC, DEPMEDS	M86675	\$203,223	5	5	5	5	19
OPERATING AND TREATMENT UNIT, FIELD DENTAL	P19377	\$15,874	34	34	34	34	252
OSCILLOSCOPE, AN/USM-488	P30693	\$2,084	222	222	222	222	208
TENT, MEDICAL, EXTENDABLE, MODULAR (TEMPER)	T47745	\$36,429	128	128	128	128	396
TENT, SURGICAL, EXTENDABLE, MODULAR (TEMPER)	T47813	\$26,578	90	100	100	100	130
HMMWV AMBULANCE, 2-LITTER, M996	T38707	\$49,357	7	7	7	7	4

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
HMMWV AMBULANCE, 4-LITTER, M997	T38844	\$113,998	207	212	212	212	276
<b>MISSILES</b>							
JAVELIN ANTI-TANK MISSILE CONTROL LAUNCH UNIT	C60750	\$126,824	24	24	26	26	30
<b>OTHER PROCUREMENT</b>							
LASER IR OBSERVATION SET, AN/GVS-5	L40063	\$4,879	31	31	31	31	0
LASER IR OBSERVATION SET (MELIOS), AN/PVS-6	M74849	\$22,015	42	44	47	47	1,411
NIGHT-VISION SIGHT, AN/UAS-12	N04982	\$116,014	20	20	20	20	2
NIGHT-VISION SIGHT, AN/PVS-4 W/IMG	N04732	\$8,535	4,191	4,191	4,191	4,191	7
NIGHT-VISION GOGGLES, AN/PVS-7B	N05482	\$3,578	20,331	20,483	20,483	20,483	57,480
NIGHT-VISION GOGGLES, AN/PVS-5	N04456	\$4,300	7,171	7,171	7,171	7,171	2
NIGHT-VISION SIGHT-TRACKER, IR, AN/TAS-5	N23721	\$23,099	16	16	16	16	1
VIEWER INFRARED, AN/PAS-7	Y03104	\$16,779	32	32	32	32	0
NAVIGATION SYSTEM, PSN-11	N95862	\$2,134	3,651	3,651	3,672	3,672	2,921
BATH UNIT, PORTABLE, SH-63LP	B43663	\$8,186	19	19	19	19	15
BATTLE COMMAND SUSTAINMENT SPT SYS (BCS3)	C56827	\$56,688	36	37	37	40	46
CLEANER, STEAM PRESSURE JET, TRL-MTD	C32887	\$18,528	472	472	472	472	559
REFRIGERATED CONTAINER ASSEMBLY	C84541	\$58,326	192	194	195	197	533
FLOODLIGHT SET, TRAILER MOUNTED	F79334	\$4,489	177	177	177	177	1,136
FOOD SANITATION CENTER	S33399	\$33,865	305	405	432	450	733
LAUNDRY UNIT, TRAILER MOUNTED	L48315	\$54,944	63	63	63	63	30
MINE DETECTING SET MINE, AN/PSS-11	G02341	\$2,944	1,406	1,406	1,412	1,412	960
REFRIGERATION UNIT, 10000 BTU	R61428	\$10,700	240	240	290	390	400
PRINTING PLANT, TRANSPORTABLE	P61665	\$283,221	5	5	5	5	7
PROCESSING MACHINE RAD FILM TABLE TOP	P98514	\$12,089	12	12	12	12	40
SHELTER, TACTICAL EXPANDABLE	S01359	\$223,219	83	83	83	83	159
<b>PETROLEUM EQUIPMENT</b>							
FUEL SYSTEM SUPPLY POINT	J04717	\$30,213	257	257	257	257	165
FORWARD AREA REFUELING EQUIPMENT (FARE)	H94824	\$9,093	95	95	95	95	72
LABORATORY, PETROLEUM SEMITRAILER MOUNTED	L33800	\$650,000	12	12	12	12	12
PUMPING ASSEMBLY, FLAMMABLE LIQUID, 350-GPM	P97119	\$26,244	147	147	147	147	391
TANK ASSEMBLY, 20000-GAL POL	T12620	\$6,065	115	115	115	115	162
TANK ASSEMBLY, 10000-GAL POL	V12552	\$6,990	222	222	222	222	244
TERMINAL, TACTICAL PETROLEUM, MARINE	T56041	\$1,400,873	0	0	0	0	12
TESTING KIT, AVIATION FUEL CONTAMINATION	T05741	\$4,565	197	199	200	201	220
FILTER-SEPARATOR LIQUID FUEL, DL13217E9320	H52087	\$4,041	916	916	916	916	430
<b>REPAIR EQUIPMENT</b>							
ELECTRONIC SHOP, AN/ASM-189	H01855	\$121,000	57	57	57	57	72
ELECTRONIC SHOP, AN/ASM-146	H01907	\$124,000	66	66	67	67	125
ELECTRONIC SHOP, AN/ASM-147	H01912	\$82,000	33	33	33	33	21
INSTUMENT REPAIR SHOP, M185A3	K90188	\$94,021	3	3	3	3	0
SHOP EQUIPMENT, AUTO MAINTENANCE & REPAIR	T24660	\$120,827	29	29	29	29	41
SHOP EQUIPMENT, AUTO MAINTENANCE & REPAIR	T25756	\$46,988	7	8	8	8	10
SHOP EQUIPMENT, AUTO MAINTENANCE & REPAIR	T25619	\$58,235	31	31	31	31	35

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
TEST SET, RADIO, AN/GRM-114	T87468	\$11,822	84	84	84	84	41
TEST SET, ELECT SYS DIRECT SUPPORT (DESETS)	T52849	\$561,312	14	14	14	14	0
TOOL OUTFIT, HYDRAULIC SYSTEM TEST & REPAIR	T30377	\$83,000	41	41	41	41	215
WELDING SHOP, TRAILER MOUNTED	W48391	\$43,250	181	197	209	212	90
WELDING SHOP, TRAILER MOUNTED	Y48323	\$9,603	4	4	4	4	115
<b>TACTICAL VEHICLES</b>							
HMMWV CGO/TRP CARRIER, M998	T61494	\$36,076	7,766	7,772	7,772	7,773	14,651
HMMWV ARMT CARRIER, ARMD, M1025	T92242	\$74,969	1,326	1,343	1,343	1,343	1,066
HMMWV SHELTER CARRIER, M1037	T07543	\$36,932	218	218	218	218	19
HMMWV CGO/TRP CARRIER, W/W, M1038	T61562	\$36,672	294	294	294	294	506
HMMWV SHELTER CARRIER, HEAVY, M1097	T07679	\$61,665	2,060	5,966	7,247	7,247	648
LMTV 2.5-TON CARGO TRUCK, M1078	T60081	\$176,428	1,526	1,758	1,933	2,031	3,213
LMTV 2.5-TON CARGO TRUCK, M1078 W/W	T60149	\$115,639	233	338	338	338	580
LMTV 2.5-TON CARGO TRUCK, W/ LAPES/AD, M1081	T41995	\$101,742	10	24	24	24	6
LMTV 2.5-TON CARGO TRUCK, M1079	T93484	\$162,060	21	57	57	65	239
MTV 5-TON CARGO TRUCK, M1083	T61908	\$128,076	289	641	790	843	2,990
MTV 5-TON CARGO TRUCK, M1085	T61704	\$118,791	1	11	11	11	13
MTV 5-TON DUMP TRUCK, M1090	T64911	\$141,557	66	66	66	66	661
MTV 5-TON TRACTOR TRUCK, M1088	T61239	\$142,132	142	306	306	306	1,576
MTV 5-TON WRECKER, M1089	T94709	\$331,680	19	73	87	93	319
HEMTT CARGO TRUCK, W/MED CRANE, M985	T39586	\$272,033	69	70	70	70	164
HEMTT CARGO TRUCK, W/LT CRANE, M977	T59278	\$251,388	56	56	56	56	12
HEMTT CARGO TRUCK, W/LT CRANE, M977 W/W	T39518	\$260,574	6	6	6	6	67
HEMTT WRECKER, M984	T63093	\$379,000	266	272	272	272	291
HEMTT FUEL TANKER, 2500GAL, M978	T87243	\$268,440	117	148	197	256	254
HEMTT FUEL TANKER, 2500GAL, M978 W/W	T58161	\$278,409	100	102	114	119	959
HEMTT COMMON BRIDGE TRANSPORTER, M1977	T91308	\$226,150	315	371	371	371	392
TRUCK, YARD TRACTOR, M878	T60353	\$96,051	94	94	97	97	220
TRUCK TRACTOR, 14-TON LINE HAUL, M915	T61103	\$162,968	1,357	1,807	1,824	1,893	2,308
TRUCK TRACTOR, 14-TON LET, M916	T91656	\$164,760	492	601	636	682	917
TRUCK TRACTOR, 20-TON MET, M920	T61171	\$74,288	265	265	265	265	0
TRUCK TRACTOR, HETS, M1070	T59048	\$256,704	260	260	260	480	488
PLS TRANSPORTER, M1074	T41067	\$288,015	80	80	80	80	0
PLS TRANSPORTER, M1075	T40999	\$276,410	689	829	929	1,050	1,168
PLS DEMOUNTABLE CARGO BED	B83002	\$16,633	1,868	2,324	2,715	3,254	4,712
PLS TRAILER, 16.5 TON, M1076	T93761	\$46,731	738	1,076	1,630	1,805	1,866
TRUCK, FORKLIFT, ROUGH TERRAIN, M-10A	T49119	\$75,923	338	339	339	339	76
TRUCK, FORKLIFT, ROUGH TERRAIN, DV43	T48941	\$159,138	84	84	84	84	108
TRUCK, FORKLIFT, ATLAS	T73347	\$100,199	529	570	629	683	507
TRUCK, FORKLIFT, ROUGH TERRAIN	T48944	\$72,370	289	289	289	289	198
TRUCK, FORKLIFT, ROUGH TERRAIN	T49255	\$47,692	532	532	533	533	465
TRUCK, TACTICAL FIRE FIGHTING	H56391	\$151,000	29	29	29	29	2
SEMITRAILER VAN, 6-TON REPAIR PARTS, M749/M750	S74832	\$32,952	47	47	47	47	44

**USAR**

Table 1

**Consolidated Major Item Inventory and Requirements**

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Unit Cost</b>	<b>Begin FY 2009 QTY O/H</b>	<b>Begin FY 2010 QTY O/H</b>	<b>Begin FY 2011 QTY O/H</b>	<b>End FY 2011 QTY O/H</b>	<b>End FY 2011 QTY REQ</b>
SEMITRAILER, 34-TON FLATBED, M872	S70159	\$43,252	1,889	2,333	2,406	2,406	1,579
SEMITRAILER, FUEL TANK, M131A5C	S72983	\$15,064	11	11	11	11	177
SEMITRAILER, 22.5-TON FLATBED, M871	S70027	\$26,500	1,284	1,492	1,500	1,500	849
SEMITRAILER TANKER, 5000-GAL BULK HAUL, M967	S10059	\$77,550	1,194	1,194	1,194	1,194	1,080
SEMITRAILER, FUEL TANK, M1062	S73119	\$27,774	285	285	285	285	480
SEMITRAILER TANKER, 5000-GAL POL, M969	S73372	\$97,413	363	443	443	443	125
SEMITRAILER VAN, ELECTRONIC, M373A2	S74353	\$24,125	16	16	16	16	0
SEMITRAILER VAN, SUPPLY, M129A1C	S75175	\$84,466	337	338	338	338	48
TRAILER, BOLSTER, 4 TON, M796	W94536	\$9,618	451	451	451	451	214
TRAILER, CARGO, 3/4-TON, M101	W95537	\$4,474	2,119	2,134	2,134	2,134	735
TRAILER, HEMAT, 11-TON, M989A1	T45465	\$34,714	69	81	81	84	132
<b>TRACKED &amp; WHEELED COMBAT SYSTEMS</b>							
RECOVERY VEHICLE, MEDIUM, FT, M88A1	R50681	\$1,210,755	26	26	26	26	26
TRACTOR, FULL TRACKED, CAT D7F DV29	W76816	\$205,000	278	278	278	278	214
TRACTOR, FULL TRACKED, CAT D7F DV29	W83529	\$245,275	274	274	274	274	150
<b>WATER EQUIPMENT</b>							
DISTRIBUTOR WATER TANK, 6K GAL TLR-MTD	D28318	\$30,289	78	78	78	78	138
HYPOCHLORINATION UNIT, WATER PURIFICATION	K60988	\$14,342	73	73	73	73	12
FORWARD AREA WATER POINT SUPPLY SYSTEM	F42612	\$19,484	53	58	61	81	78
TACTICAL WATER DISTRIB EQ SET, (TWDS RDF)	T09094	\$660,000	30	30	30	30	6
TANK, ASSEMBLY, WATER, 3000-GAL	T19033	\$2,377	265	265	265	265	0
TANK, FABRIC COLLAPSIBLE, WATER, 3000-GAL	V15018	\$1,762	4	9	9	9	114
TANK, LIQUID DISPENSING UNIT, TRL-MTD	V19950	\$2,000	363	364	364	372	762
WATER STORAGE/DISTRIBUTION SET, 800K-GAL	W37311	\$200,508	17	17	17	17	0
ROWPU WATER PURIFICATION SYSTEM, 3000-GPH	W47225	\$748,000	81	81	81	81	20
PUMPING ASSEMBLY, WATER DISTRIBUTION, 600GPM	P97369	\$27,426	188	188	188	188	36
<b>WEAPONS</b>							
MACHINE GUN, 5.56MM, M249	M09009	\$2,653	12,645	14,184	15,261	15,399	9,943
MACHINE GUN, 7.62MM, M240B	M92841	\$6,000	701	1,255	1,916	1,916	2,246
MACHINE GUN, GRENADE, 40MM, MK19 MOD III	M92362	\$15,320	2,124	2,500	2,644	2,778	2,156
RIFLE, 5.56MM, M16A2	R95035	\$449	115,738	116,413	116,779	116,779	110,829
RIFLE, 5.56MM, M16A4	R97175	\$587	3,739	3,739	3,739	3,739	3,498
CARBINE, 5.56MM, M4	R97234	\$587	11,205	14,205	14,210	14,210	11,240

**USAR**  
**Average Age of Equipment**

Table 2

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

Nomenclature	Equip No.	Average Age	Remarks
<b>ROTARY WING AIRCRAFT</b>			
HELICOPTER, ATTACK AH-64D (APACHE)	H48918	19	
HELICOPTER, CARGO CH-47D (CHINOOK)	H30517	17	
HELICOPTER, UTILITY UH-60L/Q (BLACK HAWK)	H32361	11	
<b>FIXED WING AIRCRAFT</b>			
AIRPLANE, CARGO, TRANSPORT, C-12R	A30062	11	
AIRPLANE, CARGO, TRANSPORT, UC-35	Z95382	8	
<b>CONSTRUCTION EQUIPMENT</b>			
ASPHALT MIXING PLANT	M57048	12	
CRANE, 25-TON, WHL-MTD, ATEC AT422T	C36586	8	
CRANE, WHL-MTD, ROUGH TERRAIN (RTCC)	C39398	18	
CRANE, 25-TON, TRK-MTD, CCE	F43429	31	
SCOOP LOADER, CCE	L76321	30	
SCOOP LOADER, 950BNS	L76556	22	
SCRAPER EARTH MOVING SP, 14-18 CU YD	S56246	22	
<b>ELECTRICAL GENERATION</b>			
GENERATOR SET, TRAILER MOUNTED, PU-406	J36383	24	
GENERATOR SET, TRAILER MOUNTED, PU-802	G53778	11	
<b>MEDICAL EQUIPMENT</b>			
HMMWV AMBULANCE, 2-LITTER, M996	T38707	19	
HMMWV AMBULANCE, 4-LITTER, M997	T38844	19	
<b>OTHER PROCUREMENT</b>			
DISTRIBUTOR WATER TANK, 6K GAL TLR-MTD	D28318	17	
LAUNDRY UNIT, TRAILER MOUNTED	L48315	38	
RAMP LOADING VEHICLE	R11154	14	
<b>REPAIR EQUIPMENT</b>			
ELECTRONIC SHOP, AN/ASM-189	H01855	33	
INSTUMENT REPAIR SHOP, M185A3	K90188	42	
<b>TACTICAL VEHICLES</b>			
HMMWV CGO/TRP CARRIER, M998	T61494	13	
HMMWV ARMT CARRIER, ARMD, M1025	T92242	20	
HMMWV SHELTER CARRIER, M1037	T07543	18	
HMMWV CGO/TRP CARRIER, W/W, M1038	T61562	19	
HMMWV SHELTER CARRIER, HEAVY, M1097	T07679	10	
LMTV 2.5-TON CARGO TRUCK, M1078	T60081	11	
LMTV 2.5-TON CARGO TRUCK, M1078 W/W	T60149	11	
LMTV 2.5-TON CARGO TRUCK, W/ LAPES/AD, M1081	T41995	11	
LMTV 2.5-TON CARGO TRUCK, M1079	T93484	12	
MTV 5-TON CARGO TRUCK, M1083	T61908	11	
MTV 5-TON CARGO TRUCK, M1085	T61704	7	
MTV 5-TON DUMP TRUCK, M1090	T64911	10	
MTV 5-TON TRACTOR TRUCK, M1088	T61239	7	
MTV 5-TON WRECKER, M1089	T94709	11	
HEMTT CARGO TRUCK, W/MED CRANE, M985	T39586	19	
HEMTT CARGO TRUCK, W/LT CRANE, M977	T59278	21	

**USAR**  
**Average Age of Equipment**

Table 2

Nomenclature	Equip No.	Average Age	Remarks
HEMTT CARGO TRUCK, W/LT CRANE, M977 W/W	T39518	21	
HEMTT WRECKER, M984	T63093	16	
HEMTT FUEL TANKER, 2500GAL, M978	T87243	19	
HEMTT FUEL TANKER, 2500GAL, M978 W/W	T58161	19	
HEMTT COMMON BRIDGE TRANSPORTER, M1977	T91308	11	
TRUCK, YARD TRACTOR, M878	T60353	22	
TRUCK TRACTOR, 14-TON LINE HAUL, M915	T61103	27	
TRUCK TRACTOR, 14-TON LET, M916	T91656	15	
TRUCK TRACTOR, 20-TON MET, M920	T61171	27	
TRUCK TRACTOR, HETS, M1070	T59048	12	
PLS TRANSPORTER, M1074	T41067	13	
PLS TRANSPORTER, M1075	T40999	11	
PLS DEMOUNTABLE CARGO BED	B83002	12	
PLS TRAILER, 16.5 TON, M1076	T93761	11	
TRUCK, FORKLIFT, ROUGH TERRAIN, M-10A	T49119	25	
TRUCK, FORKLIFT, ROUGH TERRAIN, DV43	T48941	22	
TRUCK, FORKLIFT, ATLAS	T73347	8	
TRUCK, FORKLIFT, ROUGH TERRAIN	T48944	16	
TRUCK, FORKLIFT, ROUGH TERRAIN	T49255	25	
TRUCK, TACTICAL FIRE FIGHTING	H56391	18	
SEMITRAILER VAN, 6-TON REPAIR PARTS, M749/M750	S74832	33	
SEMITRAILER, 34-TON FLATBED, M872	S70159	25	
SEMITRAILER, FUEL TANK, M131A5C	S72983	40	
SEMITRAILER, 22.5-TON FLATBED, M871	S70027	14	
SEMITRAILER TANKER, 5000-GAL BULK HAUL, M967	S10059	28	
SEMITRAILER, FUEL TANK, M1062	S73119	16	
SEMITRAILER TANKER, 5000-GAL POL, M969	S73372	17	
SEMITRAILER VAN, ELECTRONIC, M373A2	S74353	24	
SEMITRAILER VAN, SUPPLY, M129A1C	S75175	18	
TRAILER, BOLSTER, 4 TON, M796	W94536	25	
TRAILER, CARGO, 3/4-TON, M101	W95537	35	
TRAILER, HEMAT, 11-TON, M989A1	T45465	13	
M35-SERIES 2.5 TON TRUCK, CARGO, M35A2	X40009	38	
M35-SERIES 2.5 TON TRUCK, CARGO, M35A2 W/W	X40146	38	
M35-SERIES 2.5 TON TRUCK, CARGO, M35A2C	X40077	34	
M35-SERIES 2.5 TON TRUCK, CARGO, M36A2	X40283	35	
M809/M939-SERIES 5-TON CARGO TRUCK, M813/M924	X40831	37	
M809/M939-SERIES 5-TON CARGO TRUCK, M813/M926	X40968	37	
M809/M939-SERIES 5-TON CARGO TRUCK, M813/M923	X40794	32	
M809/M939-SERIES 5-TON CARGO TRUCK, M813/M925	X40931	23	
M35-SERIES 2.5 TON TRUCK, CARGO, M35A2C W/W	X40214	12	
TRUCK, DUMP, 20-TON, M917	X44403	32	
M809/M939-SERIES 5-TON DUMP TRUCK, M817/M929	X43708	23	
M809/M939-SERIES 5-TON DUMP TRUCK, M817/M930	X43845	39	
TRUCK TRACTOR, 5-TON, M931	X59326	36	
<b>TRACKED &amp; WHEELED COMBAT SYSTEMS</b>			
RECOVERY VEHICLE, MEDIUM, FT, M88A1	R50681	30	

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Table 3

**Service Procurement Program - Reserve (P-1R)**

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

Nomenclature	FY 2009	FY 2010	FY 2011
<b>AIRCRAFT</b>			
JOINT CARGO AIRCRAFT (JCA)		\$301,270,000	
<b>MODIFICATION OF AIRCRAFT</b>			
UTILITY/CARGO AIRPLANE MODS			5,078,000
GLOBAL AIR TRAFFIC MANAGEMENT (GATM) ROLLUP		4,507,000	2,220,000
<b>SUPPORT EQUIPMENT &amp; FACILITIES</b>			
AIR TRAFFIC CONTROL	6,000,000		
<b>ANTI-TANK/ASSAULT MISSILE SYSTEMS</b>			
JAVELIN (AAWS-M) SYSTEM SUMMARY	3,846,000	1,923,000	
<b>TRACKED COMBAT VEHICLES</b>			
STRYKER VEHICLE	130,590,000	59,400,000	65,800,000
<b>MODIFICATION OF TRACKED COMBAT VEHICLES</b>			
IMPROVED RECOVERY VEHICLE (M88A2 HERCULES)	13,200,000	13,200,000	
ARMORED BREACHER VEHICLE			12,500,000
JOINT ASSAULT BRIDGE		35,661,000	46,000,000
<b>WEAPONS &amp; OTHER COMBAT VEHICLES (WOCV)</b>			
M240 MEDIUM MACHINE GUN (7.62MM)	13,351,000	11,673,000	10,488,000
MACHINE GUN, CAL .50 M2 ROLL	2,609,000	4,626,000	3,173,000
M249 SAW MACHINE GUN (5.56MM)	5,059,000	2,753,000	
MK-19 GRENADE MACHINE GUN (40MM)	2,721,000	3,024,000	2,156,000
XM320 GRENADE LAUNCHER MODULE (GLM)	439,000	905,000	343,000
M4 CARBINE	9,713,000	10,534,000	7,207,000
SHOTGUN, MODULAR ACCESSORY SYSTEM (MASS)	32,000	128,000	96,000
<b>MODIFICATION OF WEAPONS &amp; OTHER COMBAT VEHICLES</b>			
M4 CARBINE MODS		180,000	111,000
M240 MEDIUM MACHINE GUN MODS	807,000	394,000	
M16 RIFLE MODS		338,000	294,000
<b>SUPPORT EQUIPMENT &amp; FACILITIES (WOCV)</b>			
ITEMS LESS THAN \$5.0M (WOCV-WTCV)	267,000		
<b>TACTICAL VEHICLES</b>			
TACTICAL TRAILERS/DOLLY SETS	38,336,000	42,079,000	12,455,000
SEMITRAILERS, FLATBED	8,343,000	2,791,000	6,942,000
SEMITRAILERS, TANKERS	3,622,000	1,052,000	
HI MOB MULTI-PURP WHLD VEH (HMMWV)	92,599,000	184,367,000	244,273,000
FAMILY OF MEDIUM TACTICAL VEH (FMTV)	137,969,000	453,941,000	165,057,000
FIRETRUCKS & ASSOCIATED FIREFIGHTING EQUIPMENT	4,064,000		
FAMILY OF HEAVY TACTICAL VEHICLES (FHTV)	221,424,000	339,328,000	235,124,000
ARMORED SECURITY VEHICLES (ASV)	46,266,000	27,882,000	9,288,000

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Table 3

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2009	FY 2010	FY 2011
MINE PROTECTION VEHICLE FAMILY	65,606,000	131,200,000	130,424,000
TRUCK, TRACTOR, LINE HAUL, M915/M916	7,457,000	23,863,000	44,146,000
HEMTT EXT SERV PROGRAM	4,254,000	5,461,000	4,549,000
<b>JOINT COMMUNICATIONS</b>			
WIN-T - GROUND FORCES TACTICAL NETWORK	12,782,000	71,270,000	71,000,000
<b>SATELLITE COMMUNICATIONS</b>			
NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE)	4,880,000	12,564,000	16,771,000
SMART-T (SPACE)	1,227,000		
GLOBAL BRDCST SVC - GBS	2,545,000	606,000	803,000
HIGH CAPACITY COMMUNICATIONS CAPABILITY (HC3)		4,200,000	
MOD OF IN-SVC EQUIPMENT (TAC SAT)			50,000
<b>COMBAT COMMUNICATIONS</b>			
COMMS-ELEC EQUIPMENT FIELDING	2,000,000	2,100,000	2,200,000
SPIDER APLA REMOTE CONTROL UNIT		231,000	163,000
SOLDIER ENHANCEMENT PROGRAM COMM/ELECT	143,000		
MEDICAL COMM FOR CBT CASUALTY CARE (MC4)	11,957,000	3,828,000	2,390,000
<b>INFORMATION SECURITY</b>			
TSEC - ARMY KEY MGT SYS (AKMS)	1,134,000	3,158,000	2,390,000
INFORMATION SYSTEM SECURITY PROGRAM-ISSP	2,951,000	1,569,000	1,408,000
<b>TACTICAL INTELLIGENCE &amp; RELATED ACTIVITIES (TIARA)</b>			
ALL SOURCE ANALYSIS SYS (ASAS) (MIP)	333,000	147,000	537,000
PROPHET GROUND (MIP)			71,236,000
DIGITAL TOPOGRAPHIC SPT SYS (DTSS) (MIP)	148,000	850,000	
CI HUMINT AUTO REPRTING AND COLL (CHARCS)	22,557,000	158,000	203,000
<b>TACTICAL SURVEILLANCE</b>			
NIGHT VISION DEVICES	24,133,000	29,686,000	23,636,000
NIGHT VISION, THERMAL WEAPON SIGHT	11,085,000	9,093,000	706,000
FORCE XXI BATTLE CMD BRIGADE & BELOW (FBCB2)	5,820,000	6,180,000	2,550,000
<b>TACTICAL COMMAND &amp; CONTROL (C2) SYSTEMS</b>			
TACTICAL OPERATIONS CENTERS	5,365,000	3,652,000	3,728,000
BATTLE COMMAND SUSTAINMENT SUPPORT SYSTEM (BCS3)	8,062,000	817,000	736,000
AIR & MISSILE DEFENSE PLANNING & CONTROL SYSTEM (AMD PCS)	502,000	4,467,000	160,000
TC AIMS II	4,373,000	1,581,000	507,000
JOINT NETWORK MANAGEMENT SYSTEM (JNMS)	2,137,000	5,000,000	
TACTICAL INTERNET MANAGER		409,000	
MANEUVER CONTROL SYSTEM (MCS)	6,542,000	1,025,000	410,000
SINGLE ARMY LOGISTICS ENTERPRISE (SALE)	3,657,000	2,946,000	4,664,000
<b>OTHER COMMUNICATIONS &amp; ELECTRONICS EQUIPMENT</b>			
CSS COMMUNICATIONS	977,000	1,026,000	4,902,000
ITEMS LESS THAN \$5M (SURVEYING EQUIPMENT)	600,000	1,400,000	1,000,000
ITEMS UNDER \$5M (SSE)	2,750,000		
<b>CHEMICAL DEFENSIVE EQUIPMENT</b>			

**USAR**

Table 3

**Service Procurement Program - Reserve (P-1R)**

Nomenclature	FY 2009	FY 2010	FY 2011
CBRN SOLDIER PROTECTION			17,818,000
SMOKE & OBSCURANT FAMILY: SOF (NON AAO ITEM)	1,900,000	790,000	
<b>BRIDGING EQUIPMENT</b>			
TACTICAL BRIDGING	14,041,000	13,940,000	13,995,000
TACTICAL BRIDGE, FLOAT-RIBBON	16,279,000	88,415,000	51,287,000
<b>ENGINEER (NON-CONSTRUCTION) EQUIPMENT</b>			
HANDHELD STANDOFF MINEFIELD DETECTION SYS-HST	12,880,000	19,019,000	17,532,000
GRND STANDOFF MINE DETECTION SYS (GSTAMIDS)			54,346,000
<b>COMBAT SERVICE SUPPORT EQUIPMENT</b>			
HEATERS AND ECU'S	3,350,000	2,069,000	2,503,000
FIELD FEEDING EQUIPMENT	22,784,000	19,631,000	9,892,000
PARACHUTE & AERIAL DEL SYS	1,028,000	4,221,000	4,277,000
MOBILE INTEGRATED REMAINS COLLECTION SYSTEM	17,803,000	18,335,000	5,282,000
ITEMS LESS THAN \$5M (ENG SPT)	103,000	2,204,000	3,156,000
<b>PETROLEUM &amp; WATER EQUIPMENT</b>			
DISTRIBUTION SYSTEMS, PETROLEUM & WATER	11,817,000	18,183,000	22,611,000
WATER PURIFICATION SYSTEMS	10,799,000	9,066,000	7,913,000
<b>MEDICAL EQUIPMENT</b>			
COMBAT SUPPORT MEDICAL	30,667,000	14,457,000	19,137,000
<b>MAINTENANCE EQUIPMENT</b>			
MOBILE MAINTENANCE EQUIPMENT SYSTEMS	8,217,000	17,482,000	25,336,000
<b>CONSTRUCTION EQUIPMENT</b>			
SKID STEER LOADER (SSL) FAMILY OF SYSTEM	7,650,000	7,680,000	6,676,000
MISSION MODULES - ENGINEERING	687,000	740,000	10,830,000
LOADERS	5,726,000	2,840,000	496,000
HYDRAULIC EXCAVATOR	5,896,000	6,339,000	6,486,000
TRACTOR, FULL TRACKED	6,133,000	10,865,000	4,224,000
PLANT, ASPHALT MIXING	3,070,000	4,400,000	
HIGH MOBILITY ENGINEER EXCAVATOR (HMEE) FOS	989,000	1,868,000	1,112,000
CONSTRUCTION EQUIPMENT ESP	3,694,000	4,275,000	4,761,000
ITEMS LESS THAN \$5.0M (CONSTRUCTION EQUIPMENT)	2,624,000	5,613,000	2,369,000
<b>OTHER SUPPORT EQUIPMENT</b>			
HARBORMASTER COMMAND & CONTROL CENTER (HCCC)	1,367,000	6,110,000	6,251,000
GENERATORS AND ASSOCIATED EQUIPMENT	51,855,000	47,130,000	37,334,000
ROUGH TERRAIN CONTAINER HANDLER (RTCH)	24,024,000	16,302,000	18,018,000
ALL TERRAIN LIFTING ARMY SYSTEM	9,990,000	9,250,000	8,325,000
CALIBRATION SETS EQUIPMENT		1,340,000	1,750,000
INTEGRATED FAMILY OF TEST EQUIPMENT (IFTE)	920,000	6,249,000	5,400,000
GENERAL PURPOSE ELECTRONIC TEST EQUIPMENT (GPETE)	1,718,000	807,000	724,000
<b>TOTAL</b>	<b>\$1,235,245,000</b>	<b>\$2,190,063,000</b>	<b>\$1,589,715,000</b>

**National Guard and Reserve Equipment Appropriation (NGREA) Procurements**

*NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.*

<b>Nomenclature</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>
FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV)	\$25,998,197	\$31,206,510	\$15,840,000
TRUCK, TRACTOR LINE HAUL, M915A3	9,750,000	2,095,872	
M4 CARBINE RIFLE, 5.56MM	1,012,576	621,000	
MULTI-BAND SUPER HIGH FREQUENCY TERMINAL	7,870,427	28,231,490	
DEFENSE ADV GLOBAL POSITIONING SYSTEM (GPS) RECEIVER	337,200		
M1075 TRUCK CARGO	25,560,092		
M872A3 SEMITRAILER, FLATBED	10,058,285		
ROUGH TERRIAN CARGO HANDLER	9,995,200		
ALL TERRAIN LIFTER ARMY SYSTEM	6,668,441		
M917A2 DUMP TRUCK	5,138,499		
AIR TRAFFIC NAVIGATION, INTEGRATION COORDINATION SYS	7,168,542		
M916A3 TRACTOR	6,448,000	3,059,252	
CONTAINER HANDLING UNIT	3,840,000		
M1076 PALLETIZED LOAD SYSTEM TRAILER	2,162,118		
M1095/M1082 TRAILER CARGO, FMTV	1,557,225		
15KW GENERATOR POWER UNIT	1,836,914		
ALARM, CHEMICAL AGENT, AUTOMATIC, M22	950,000		800,000
IMPROVED CHEMICAL AGENT MONITOR	675,000		
MAINTENANCE SPT DEVICE/INTERNAL COMBUSTION ENGINE	2,060,053	4,941,300	4,941,300
5KW GENERATOR SKID-MTD	207,147		
3KW GENERATOR SKID-MTD	184,750		
POWER UNIT, PU-801A 15 KW	118,334		
COMMUNICATION, COMMAND CONTROL COMPUTERS & INTEL		6,300,000	
COMPUTER SYS DIG, AN/UYQ-90(V)2 MTS		4,779,576	
SHOP EQUIPMENT, CONTACT MAINT TRUCK		2,595,000	
MACHINE GUN 40MM: MK19 & EQUIPMENT		1,980,000	
MACHINE GUN, .50 CAL, M2 HB FL GD/VEH		1,350,000	
NIGHT VISION GOGGLES		1,178,000	
THERMAL WEAPON SIGHT		810,000	
SIMPLE KEY LOADER (SKL), AN/PYQ-10		600,000	
BRIDGE ADAPTOR PALLET		112,000	
JOINT SMALL TRANSPORTABLE DECONTAMINATION SYSTEM (JSTDS-SS)			3,912,700
BATTLE COMMAND SUSTAINMENT SUPPORT SYSTEM (BCS3)			3,060,000
FMTV CARGO TRAILER			1,560,000
COMMON BRIDGE TRANSPORTER			4,140,000
POWER DISTRIBUTION ILLUMINATION SYS ELECTRIC (PDISE)			2,400,000
GENERATORS, 100KW PU-807A			5,005,000
TOOLKIT, SMALL ARMS REPAIRMAN			875,000
NAVIGATION SET SATELLITE SYSTEMS			300,000
SHELTER TACTICAL EXPANDABLE			620,000
TACTICAL ELECTRICAL POWER (3KW-60KW) TQG			1,242,000
<b>TOTAL</b>	<b>\$129,597,000</b>	<b>\$89,860,000</b>	<b>\$44,696,000</b>

### Projected Equipment Transfer/Withdrawal Quantities

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the Active receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty
PLS DEMOUNTABLE CARGO BED	B83002	+21		
CHEMICAL AGENT MONITOR, IMPROVED (ICAM)	C05701	+20	+2	+4
CRANE, 7.5-TON, WHL-MTD	C36151	+1		
BATTLE COMMAND SUSTAINMENT SPT SYS (BCS3)	C56827	+1		+3
COLLECTIVE PROTECTION EQUIPMENT, NBC, M20	C79000		+4	
REFRIGERATED CONTAINER ASSEMBLY	C84541		+1	+2
RADAR SIGNAL DETECTION SET, AN/APR-39A(V)1	D03159		+2	
DECONTAMINATING APPARATUS, M17	D82404	+2		
DEFIBRILLATOR MONITOR RECORDER	D86072	+9	+9	+3
COMPACTOR, HIGH SPEED, SELF-PROPELLED, CCE	E61618		+1	
ELECTRONIC TRANSFER KEYING DEVICE, KYK-13	E98103	+6	+2	
FORWARD AREA WATER POINT SUPPLY SYSTEM	F42612	+1		
DECONTAMINATING APPARATUS, M12	F81880	+39	+5	
MINE DETECTING SET MINE, AN/PSS-11	G02341		+6	
GENERATOR SET, MEP-802A	G11966		+13	
GENERATOR SET, MEP-804A	G12170	+1		
GENERATOR SET, TRAILER MOUNTED, PU-798	G42170	+2	+16	
GENERATOR SET, TRAILER MOUNTED, PU-802	G53778	+3		
GENERATOR SET, MEP-803A	G74711	+4		
ROAD GRADER, MOTORIZED, CCE	G74783	+6		
ELECTRONIC SHOP, AN/ASM-146	H01907		+1	
HELICOPTER, CARGO CH-47D (CHINOOK)	H30517	+2		+8
RADIO SET, AN/GRC-193A	H35404	+18		
HELICOPTER, ATTACK AH-64D (APACHE)	H48918		+12	
FACSIMILE, LIGHTWEIGHT DIGITAL, AN/UXC-7	L67964	+2		
SCOOP LOADER, CCE	L76321		+1	
MASK, CBR PROTECTIVE FIELD, M17A1	M11895	+142		
MASK, CHEMICAL-BIOLOGICAL, M40	M12418	+990	+340	
MEDICAL EQUIPMENT SET, FIELD SICK CALL	M30156	+1		
MEDICAL EQUIPMENT SET, FIELD TRAUMA	M30499	+1		
LASER IR OBSERVATION SET (MELIOS), AN/PVS-6	M74849	+2	+3	
MACHINE GUN, GRENADE, 40MM, MK19 MOD III	M92362	+70		
MACHINE GUN, 7.62MM, M240B	M92841		+1	
NIGHT-VISION GOGGLES, AN/PVS-7B	N05482	+786		
NAVIGATION SYSTEM, PSN-11	N95862		+21	
POWER SUPPLY, PP-6224/U	P40750	+2		
POWER PLANT, AN/MJQ-41	P42194	+6		
POWER PLANT, AN/NJQ-37	P42262	+1		

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Table 5

**Projected Equipment Transfer/Withdrawal Quantities**

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty
RADIACMETER, IM-93A/UD	Q20935	+4		
RADIAC SET, AN/PDR-75	R30925	+1		
RADIAC SET, AN/UDR-13	R31061	+103	+1	
RIFLE, 5.56MM, M16A2	R95035	+675	+366	
CARBINE, 5.56MM, M4	R97234		+5	
SPEECH SECURITY EQUIPMENT, TSEC/KY-57	S01373	+83		
SPECTRUM ANALYZER, AN/USM-489(V)1	S01416	+2		
FOOD SANITATION CENTER	S33399	+38		+2
SEMITRAILER, 22.5-TON FLATBED, M871	S70027		+8	
SEMITRAILER VAN, SUPPLY, M129A1C	S75175	+1		
TESTING KIT, AVIATION FUEL CONTAMINATION	T05741	+2	+1	+1
HMMWV SHELTER CARRIER, HEAVY, M1097	T07679		+18	
SHOP EQUIPMENT, AUTO MAINTENANCE & REPAIR	T25756	+1		
TRACTOR, WHLD EXCAVATOR, SEE	T34437	+3	+12	
HEMTT CARGO TRUCK, W/LT CRANE, M977 W/W	T39518	+1		
TRAILER, HEMAT, 11-TON, M989A1	T45465	+11		+3
TRUCK, FORKLIFT, ROUGH TERRAIN	T49255		+1	
RADIO TERMINAL, TELEPHONE, AN/VRC-97	T55957	+255	+1	
HEMTT FUEL TANKER, 2500GAL, M978 W/W	T58161	+32	+24	+30
LMTV 2.5-TON CARGO TRUCK, M1078	T60081	+18		
LMTV 2.5-TON CARGO TRUCK, M1078 W/W	T60149	+1		
TRUCK, YARD TRACTOR, M878	T60353	+15	+1	
TRUCK TRACTOR, 14-TON LINE HAUL, M915	T61103	+53	+1	
MTV 5-TON TRACTOR TRUCK, M1088	T61239	+1		
HMMWV CGO/TRP CARRIER, M998	T61494	+37	+1,190	+1
HMMWV CGO/TRP CARRIER, W/W, M1038	T61562		+39	
MTV 5-TON CARGO TRUCK, M1083	T61908	+39		
HEMTT WRECKER, M984	T63093	+2		
TRUCK, FORKLIFT, ATLAS	T73347	+3		
HEMTT FUEL TANKER, 2500GAL, M978	T87243	+17		
TRUCK TRACTOR, 14-TON LET, M916	T91656		+13	
PLS TRAILER, 16.5 TON, M1076	T93761	+42		
MTV 5-TON WRECKER, M1089	T94709	+1	+8	
TANK, FABRIC COLLAPSIBLE, WATER, 3000-GAL	V15018	+5		
TANK, LIQUID DISPENSING UNIT, TRL-MTD	V19950	+1		+8
TRAILER, CARGO, 3/4-TON, M101	W95537	+15		

**FY 2005 Planned vs Actual Procurements and Transfers**

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGREA columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b>FY 2005 PLANNED TRANSFERS &amp; WITHDRAWALS</b>							
<b>CHEM BIO EQUIPMENT</b>							
DECONTAMINATING APPARATUS	D82404	+96	0				
MONITOR CHEMICAL AGENT	C05701	+164	0				
<b>COMBAT COMMUNICATIONS</b>							
HF RADIO SET: AN/GRC-1	H35404	+73	+242				
LTWT DIG FAC AN/UXC-7	L67964	+82	0				
MOBILE SUBS AN/VRC-97	T55957	+126	0				
RADIAC SET AN/PDR-75	R30925	+83	0				
RADIO SET: AN/GRC-213	R30895	+1	0				
<b>CONSTRUCTION EQUIPMENT</b>							
TRCTR WHLD EXCAV	T34437	+38	0				
<b>GENERATORS</b>							
GEN ST DSL MEP-802A	G11966	+181	0				
GEN ST DSL MEP-803A	G74711	+105	0				
GENERATOR SET DIESEL E	G35851	+2	0				
POWER PLANT: ELECTRIC	P42194	+5	0				
<b>MEDICAL EQUIPMENT</b>							
DEFIBRILLATOR CARDIOS	D86072	+6	0				
MMS CENTRAL MATERIAL	M08417	+1	0				
MMS INTER CARE WARD	M08599	+2	0				
MMS OPERATING ROOM	M72936	+1	0				
MMS POST-OP/ICU DEP	M09576	+1	0				
<b>OTHER PROCUREMENT</b>							
CENTRAL OFFICE COMMS	C41311	+2	0				
DIG D GEN SG-1139/G	D37041	+8	0				
MELIOS LASER AN/PVS-6	M74849	+1	0				
MG GRENAD MK19 MODIII	M92362	+672	0				
<b>PETROLEUM EQUIPMENT</b>							
FILT SEP DL13217E9320	H52087	+49	0				
TANK ASY PTR 10000GAL	V12552	+5	0				
TEST KIT PETROLEUM AV	T05741	+3	0				
<b>REPAIR EQUIPMENT</b>							
WELDING SHOP TRAILER M	W48391	+70	0				

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Table 6

FY 2005 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b>TACTICAL VEHICLES</b>							
STLR FB 34T M872	S70159	+261	0				
STLR TNK FUEL M969	S73372	+106	0				
TLR BOL G/P 4T M796	W94536	+59	0				
TRK LFT FK VAR RCH RT	T73347	+23	0				
TRK UTIL 1-1/4T M1038	T61562	+9	0				
TRK UTIL 1-1/4T M998	T61494	+620	+378				
TRK WRK M984 W/W	T63093	+16	0				
<b>WATER EQUIPMENT</b>							
FORWARD AREA WATER POINT	F42612	+15	0				
<b>FY 2005 P-1R EQUIPMENT</b>							
<b>MODIFICATION OF AIRCRAFT</b>							
CH-47 CARGO HELICOPTER MODS				\$41,000,000	\$0		
GATM ROLLUP				1,255,000	1,255,000		
<b>WEAPONS AND OTHER COMBAT VEHICLES</b>							
ARMOR MACHINE GUN, 7.62MM M240 SERIES				1,233,000	1,233,000		
XM107, CAL. 50, SNIPER RIFLE				44,000	44,000		
5.56 CARBINE M4				2,660,000	2,660,000		
<b>TACTICAL AND SUPPORT VEHICLES</b>							
HI MOB MULTI-PURP WHLD VEH (HMMWV)				20,032,000	20,032,000		
FAMILY OF MEDIUM TACTICAL VEH (FMTV)				198,832,000	198,832,000		
FAMILY OF HEAVY TACTICAL VEHICLES (FHTV)				266,000	266,000		
TRUCK, TRACTOR, LINE HAUL, M915/M916				1,787,000	1,787,000		
<b>COMMUNICATIONS AND ELECTRONICS EQUIPMENT</b>							
NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE)				106,000	106,000		
COMM-ELEC EQUIP FIELDING				45,000	0		
MEDICAL COMM FOR CBT CASUALTY CARE (MC4)				1,162,000	0		
TSEC - ARMY KEY MGT SYS (AKMS)				90,000	0		
NIGHT VISION, THERMAL WPN SIGHT				1,361,000	0		
JOINT NETWORK MANAGEMENT SYSTEM (JNMS)				1,060,000	0		
<b>OTHER SUPPORT EQUIPMENT</b>							
TACTICAL BRIDGING				19,050,000	19,050,000		
TACTICAL BRIDGE, FLOAT-RIBBON				790,000	790,000		
LIGHTWEIGHT MAINTENANCE ENCLOSURE (LME)				20,000	0		
FIELD FEEDING EQUIPMENT				169,000	169,000		
ITEMS LESS THAN \$5.0M (ENG SPT EQ)				76,000	76,000		
COMBAT SUPPORT MEDICAL				1,944,000	1,944,000		
SHOP EQ CONTACT MAINTENANCE TRK MTD				1,779,000	1,779,000		

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Table 6

**FY 2005 Planned vs Actual Procurements and Transfers**

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
LOADERS				528,000	528,000		
GENERATORS AND ASSOCIATED EQUIP				7,176,000	7,176,000		
MOD OF IN-SVC EQUIPMENT (OPA-3)				20,000	0		
<b><u>FY 2005 NGREA EQUIPMENT</u></b>							
MOVEMENT TRACKING SYSTEM (MTS)						\$2,520,000	\$2,520,000
M4 CARBINE RIFLE						1,149,300	3,275,300
TRUCK TRACTOR LINE HAUL M915A3						2,480,000	5,085,000
SEMITRAILER BREAKBULK 22.5 TON, M871A3						2,772,000	2,772,000
LASER MARKSMANSHIP TRAINING SYSTEM						1,000,000	1,000,000
HANDHELD STANDOFF MINE DETECTION SYSTEM, AN/PSS-14						3,920,000	3,920,000
M249 SQUAD AUTOMATIC WEAPON						4,574,400	4,574,400
M249 MACHINE GUN, LIGHT, 5.56MM						0	3,141,160
M249 MACHINE GUN, HEAVY, 5.56MM						0	3,125,840
COMMAND LAUNCH UNIT, JAVELIN						4,332,762	0
HIGH FREQUENCY RADIOS						6,768,000	8,131,386
NIGHT VISION DEVICES						2,426,738	2,426,738
AN/PVS-14 MONOCULAR NVG						0	3,607,000
MULTI-BAND SUPER HIGH FREQUENCY TERMINAL						4,400,000	4,400,000
GENERATOR SET 10KW, 60HZ, MEP803A						630,000	599,000
DEFENSE ADVANCED GPS RECEIVER						2,872,800	2,872,800
CANCELLED 1997 APPROPRIATION REPAYMENT						0	364,376
<b>TOTAL</b>				<b>\$302,485,000</b>	<b>\$257,727,000</b>	<b>\$39,846,000</b>	<b>\$51,815,000</b>

**Major Item of Equipment Substitution List**

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
AIRPLANE CARGO TRAN: C-12F	A30062	AIRPLANE CARGO TRAN: C-12D & C-12R	MULTIPLE	17	X	
ALARM: CHEMICAL AGENT AUTOMATIC M22	A33020	ALARM CHEMICAL AGENT AUTOMATIC: PORTABLE MANPACK M8A1	A32355	3,838	X	
BATH UNIT PORTABLE: GED 8 9 SH LESS POWER	B43663	NON-STANDARD LINS	MULTIPLE	63		X
DISTRIBUTOR WATER TANK TYPE: 6000 GL SEMITRAILER MTD (CCE)	D28318	DISTRIBUTOR WATER TANK TYPE: GAS TRK MTD 1000 GAL	G28212	3	X	
DISTRIBUTOR WATER TANK TYPE: 6000 GL SEMITRAILER MTD (CCE)	D28318	TRUCK TANK: WATER 1000 GALLON 2 1/2 TON 6X6	X58367	3		X
DATA TRANSFER DEVICE: AN/CYZ 10	D78555	ELEC TRANSFER KEYING DEVICE ETKD: KYK 13/TSEC	E98103	2,366	X	
DATA TRANSFER DEVICE: AN/CYZ 10	D78555	NET CONTROL DEVICE NCD: KYX 15/TSEC	N02758	1,064	X	
DATA TRANSFER DEVICE: AN/CYZ 10	D78555	TAPE READER GENERAL PURPOSE: KOI 18/TSEC	T40405	121	X	
FORWARD AREA REFUELING SYSTEM: ADVANCED AVIATION (AAFARS)	F42611	FORWARD AREA REFUELING EQUIPMENT: (FARE)	H94824	4	X	
FLOODLIGHT SET TRAILER MOUNTED: 3 FLOODLIGHTS 1000 WATT	F79334	FLOODLIGHT ST ELEC: PTBL 6 LIGHTS MST MTD 5KW 120/208V (ARMY)	H79221	206	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST DSL ENG: 5KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35813	511	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST DSL ENG: 10KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35825	19	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST DSL ENG: 15KW 60HZ 3PH AC 120/208 240/416V SKD TAC UTIL	J35835	6	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST DSL ENG: 30KW 60HZ 3PH AC 120/208 240/416V 50HZ TAC UTIL	J36109	3	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST DSL ENG TM: 30KW 60HZ MTD ON M 200A1 PU 406	J36383	3	X	
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST GAS ENG: 3KW 60HZ 1 3PH 120/240 120/208V SKD TAC UTILITY	J45699	14		X
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST GAS ENG: 5KW 60HZ 1 3PH AC 120/240 120/208V SKD TAC UTIL	J47068	56		X
GEN SET: DED SKID MTD 5KW 60HZ	G11966	GEN ST GAS ENG TM: 5KW 60HZ 2EA MTD ON M116 PU 620	J47617	3		X

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
GEN SET: DED SKID MTD 60KW 50/60HZ	G12034	GEN ST DSL ENG: 60KW 60HZ 3PH AC 120/208 240/416 50HZ TAC UTIL	J38301	28	X	
GEN SET: DED SKID MTD 15KW 50/60HZ	G12170	GEN ST DSL ENG: 15KW 60HZ 3PH AC 120/208 240/416V SKD TAC UTIL	J35835	25	X	
GEN SET: DED SKID MTD 15KW 50/60HZ	G12170	GEN ST DSL ENG: 30KW 60HZ 3PH AC 120/208 240/416V 50HZ TAC UTIL	J36109	2	X	
GEN SET: DED SKID MTD 15KW 50/60HZ	G12170	GEN ST DSL ENG: 200KW 60HZ 3PH AC 240/416V SKD TACTICAL UTILITY	J40158	2	X	
GEN SET: DED SKID MTD 3KW 60HZ	G18358	GEN ST DSL ENG: SKID MTD 3KW 60 HZ AC 120/208V MEP 016B	G54041	788	X	
GEN SET: DED SKID MTD 3KW 60HZ	G18358	GEN ST DSL ENG: 5KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35813	272	X	
GEN SET: DED SKID MTD 3KW 60HZ	G18358	GEN ST GAS ENG: 3KW 60HZ 1 3PH 120/240 120/208V SKD TAC UTILITY	J45699	221	X	
GENERATOR SET DIESEL ENGINE TM: PU 803	G35851	GEN ST DSL ENG TM: 30KW 60HZ MTD ON M 200A1 PU 406	J36383	33	X	
GEN SET DED TM: 10KW 60HZ MTD ONM116A2 PU 798	G42170	GEN ST DSL ENG TM: 10KW 60HZ MTD ON M116 PU 753/M	G40744	25	X	
GEN SET DED TM: 5KW 60HZ MTD ON M116A2 PU 797	G42238	GEN ST DSL ENG TM: 5KW 60HZ MTD ON M116 PU 751/M	G37273	33	X	
GENERATOR SET DIESEL ENGINE TM: PU 802	G53778	GEN ST DSL ENG TM: 15KW 60HZ MTD ON M 200A1 PU 405	J35492	62	X	
GENERATOR SET DIESEL ENGINE TM: PU 802	G53778	GEN ST DSL ENG: 15KW 60HZ 3PH AC 120/208 240/416V SKD TAC UTIL	J35835	31	X	
GENERATOR SET DIESEL ENGINE TM: PU 802	G53778	GEN ST DSL ENG TM: 30KW 60HZ MTD ON M 200A1 PU 406	J36383	36	X	
GENERATOR SMOKE MECHANICAL: MOTORIZED FOR DUAL PURPOSE UNIT M56	G58151	GENERATOR SET SMOKE MECHANICAL: PULSE JET M157	G51840	24	X	
GEN SET: DED SKID MTD 30KW 50/60HZ	G74575	GEN ST DSL ENG: 30KW 60HZ 3PH AC 120/208 240/416V 50HZ TAC UTIL	J36109	30	X	
GEN SET: DED SKID MTD 10KW 60HZ	G74711	GEN ST DSL ENG: 10KW 60HZ 1 3PH AC 120/208 120/240V TAC UTIL	J35825	322	X	
GEN SET: DED SKID MTD 10KW 60HZ	G74711	GEN ST DSL ENG: 15KW 60HZ 3PH AC 120/208 240/416V SKD TAC UTIL	J35835	24	X	
GENERATOR SET: DIESEL TRL/MTD 60KW 50/60HZ PU805 CHASSIS W/FENDE	G78306	GEN ST DSL ENG TM: 60KW 60HZ MTD ON M 200A1 PU 650	J35629	40	X	
GENERATOR SMOKE MECHANICAL: MECHANIZED SMOKE OBSCURANT SYSTEM	G87229	CARRIER SMOKE GENERATOR: FULL TRACKED ARMORED	C12815	7	X	
HF RADIO SET: AN/GRC 193A	H35404	RADIO SET: AN/GRC 106	Q32756	172	X	

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Table 7

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
FIRE FIGHTING EQUIPMENT SET: TRUCK MTD MULTIPURPOSE	H56391	TRUCK: TACTICAL FIREFIGHTING 8X8HVY EXP MOV	T82180	17	X	
MASK CBR: PROTECTIVE FIELD	M11895	MASK CHEMICAL BIOLOGICAL: M40	M12418	1,395	X	
MASK CHEMICAL BIOLOGICAL: COMBATVEHICLE M42	M18526	MASK CHEMICAL BIOLOGICAL: M40	M12418	57	X	
MEDICAL EQUIPMENT SET SICK CALL FIELD (2):	M30156	MEDICAL EQUIPMENT SET SICK CALL FIELD (1):	M29906	4	X	
MEDICAL EQUIPMENT SET SICK CALL FIELD (2):	M30156	MES BATTALION AID STATION:	M52274	3	X	
MACHINE GUN: LIGHT 5.56MM M249	M39263	MACHINE GUN 7.62 MM, M134	L92386	192	X	
MACHINE GUN: LIGHT 5.56MM M249	M39263	MACHINE GUN 5.56 MILLIMETER: M249	M09009	1,752	X	
MACHINE GUN: LIGHT 5.56MM M249	M39263	MACHINE GUN: 7.62MM M240B	M92841	25	X	
NIGHT VISION SIGHT CREW SERVED WEAPON: AN/TVS 5	N04596	NIGHT VISION SIGHT INDIVIDUAL SERVED WEAPON: AN/PVS 4	N04732	248	X	
NIGHT VISION GOGGLE: AN/PVS 7B	N05482	MONOCULAR NIGHT VISION DEVICE: AN/PVS 14	M79678	204	X	
NIGHT VISION GOGGLE: AN/PVS 7B	N05482	NIGHT VISION GOGGLES: AN/PVS 5	N04456	5,980	X	
NIGHT VISION GOGGLE: AN/PVS 7B	N05482	NIGHT VISION SIGHT INDIVIDUAL SERVED WEAPON: AN/PVS 4	N04732	481	X	
NAVIGATION SET SATELLITE SYSTEMS:	N95862	NAVIGATION SET, SATELLITE SIGNALS AN/PSN 13(A)	FA2594	476	X	
OPERATING AND TREATMENT UNIT DENTAL FIELD:	P19377	DENTAL OPERATING AND TREATMENT UNIT FIELD:	F95601	181	X	
RADIO SET: AN/GRC 213	R30895	RADIO SET: AN/GRC 106	Q32756	32		X
RADIO SET: AN/PRC 104A	R55200	RADIO SET: AN/PRC 74	Q38296	44		X
RADIO SET: AN/VRC 88F(C)	R67330	RADIO SET: AN/VRC 88A	R67194	64	X	
RADIO SET: AN/VRC 90A	R67908	RADIO SET: AN/VRC 46	Q53001	40		X
RADIO SET: AN/VRC 90A	R67908	RADIO SET: AN/PRC 119A	R83005	46	X	
RADIO SET: AN/PRC 112	R82903	RADIO SET: AN/PRC 90	Q38335	31	X	
SANITATION CENTER: FOOD	S33399	HEATER IMMERSION LIQUID FUEL FIRED: 34 3/4 IN LG OF HEATER	K25342	531	X	
SEMITRAILER TANK: FUEL SERVICING 5000 GALLON 12 TON 4 WHEEL	S72983	SEMITRAILER TANK: 5000 GAL FUEL DISPENSING AUTOMOTIVE	S73372	23	X	
SHOP EQUIP CONTACT MAINT TRK MTD:	T10138	SHOP EQUIPMENT GENERAL PURPOSE: TRUCK MOUNTED EOD	S31232	1	X	
SHOP EQUIP CONTACT MAINT TRK MTD:	T10138	TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679	5	X	
TANK ASSEMBLY FABRIC COLLAPSIBLE: 20000 GAL PETROLEUM	T12620	NON-STANDARD LINS	MULTIPLE	221	X	

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
TANK ASSEMBLY FABRIC COLLAPSIBLE: 3000 GAL WATER	T19033	NON-STANDARD LINS	MULTIPLE	149	X	
TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/MED CRANE	T39586	TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/W W/LT CRANE	T39518	3	X	
TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/MED CRANE	T39586	TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/LT CRANE	T59278	7	X	
TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/MED CRANE	T39586	TRUCK CARGO: DROP SIDE 5 TON 6X6	X40794	3	X	
TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/MED CRANE	T39586	TRUCK CARGO: DROP SIDE 5 TON 6X6 W/W	X40931	2	X	
TRUCK CARGO: HEAVY PLS TRANSPORTER 15 16.5 TON 10X10, M1075	T40999	TRUCK CARGO: HEAVY PLS TRANSPORTER 15 16.5 TON 10X10 W/MHE, M1074	T41067	80	X	
TRUCK CARGO: HEAVY PLS TRANSPORTER 15 16.5 TON 10X10	T40999	TRUCK DUMP: 20 TON DSL DRVN 12 CU YD CAP (CCE)	X44403	2	X	
TRUCK CARGO: 5 TON 6X6 MTV LAPES/AD	T41036	TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/W W/LT CRANE	T39518	1	X	
TRUCK CARGO: 5 TON 6X6 MTV LAPES/AD	T41036	TRUCK CARGO: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/LT CRANE	T59278	2	X	
TRUCK CARGO: MTV W/W	T41135	TRUCK CARGO: 2 1/2 TON, M35 SERIES	MULTIPLE	31		X
TRUCK CARGO: MTV W/W	T41135	TRUCK CARGO: 5 TON, M54 SERIES	MULTIPLE	207		X
TRUCK CARGO: MTV W/MHE	T41203	TRUCK CARGO: 5 TON, M54 SERIES	MULTIPLE	4		X
TERMINAL RADIO TELEPHONE MOBILE SUBSCRIBER: AN/VRC 97	T55957	RECEIVER TRANSMITTER: RT 1539(P)A(C)/G	R30434	38	X	
TRUCK CARGO: 4X4 LMTV	T60081	TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679	5		X
TRUCK CARGO: 4X4 LMTV	T60081	TRUCK CARGO: 2 1/2 TON, M35 SERIES	MULTIPLE	980		X
TRUCK CARGO: 4X4 LMTV	T60081	TRUCK CARGO: 5 TON, M54 SERIES	MULTIPLE	206	X	
TRUCK CARGO: 4X4 LMTV	T60081	TRUCK VAN: EXPANSIBLE 5 TON 6X6 (ARMY)	X62237	6	X	
TRUCK CARGO: 4X4 LMTV W/W	T60149	TRUCK CARGO: 2 1/2 TON, M35 SERIES	MULTIPLE	290		X
TRUCK CARGO: 4X4 LMTV W/W	T60149	TRUCK CARGO: 5 TON, M54 SERIES	MULTIPLE	58	X	
TRUCK CARGO: 4X4 LMTV W/W	T60149	TRUCK VAN: EXPANSIBLE 5 TON 6X6 (ARMY)	X62237	2	X	
TRUCK TRACTOR: YD 46000 GVW 4X2	T60353	TRUCK TRACTOR: 5 TON 6X6	X59326	47		X

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
TRUCK TRACTOR: YD 46000 GVW 4X2	T60353	TRUCK TRACTOR: 5 TON 6X6 W/W	X59463	3	X	
TRUCK TRACTOR: LINE HAUL C/S 50000 GVWR 6X4 M915	T61103	TRUCK CARGO: 5 TON, M54 SERIES	X59326	335		X
TRUCK TRACTOR: LINE HAUL C/S 50000 GVWR 6X4 M915	T61103	TRUCK TRACTOR: 5 TON 6X6 W/W	X59463	27	X	
TRUCK TRACTOR: MTV	T61239	TRUCK CARGO: DROP SIDE 5 TON 6X6	X40794	4	X	
TRUCK TRACTOR: MTV	T61239	TRUCK TRACTOR: 5 TON 6X6	X59326	1,322		X
TRUCK TRACTOR: MTV	T61239	TRUCK TRACTOR: 5 TON 6X6 W/W	X59463	151	X	
TRUCK TRACTOR: MTV W/W	T61307	TRUCK TRACTOR: 5 TON 6X6	X59326	18	X	
TRUCK TRACTOR: MTV W/W	T61307	TRUCK TRACTOR: 5 TON 6X6 W/W	X59463	46	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY: TACTICAL 3/4 TON M1009 CUCV	T05028	834		X
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY: TOW CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T05096	257	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY: S250 SHELTER CARRIER 4X4 (HMMWV)	T07543	24	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679	804	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK CARGO: TACTICAL 5/4 TON, CUCV	T59346	377		X
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY ARM: 4X4 W/AOA	T91490	5	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T92242	496	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 (HMMWV)	T61494	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 W/W (HMMWV)	T92310	96	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 W/W (HMMWV)	T61562	TRUCK UTILITY: TACTICAL 3/4 TON CUCV	MULTIPLE	167		X
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 W/W (HMMWV)	T61562	TRUCK UTILITY: TOW CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T05096	13	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 W/W (HMMWV)	T61562	TRUCK UTILITY: S250 SHELTER CARRIER 4X4 (HMMWV)	T07543	6	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 W/W (HMMWV)	T61562	TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679	5	X	
TRUCK UTILITY: CARGO/TROOP CARRIER 1 1/4 TON 4X4 W/W (HMMWV)	T61562	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T92242	46	X	

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Table 7

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
TRUCK UTILITY: EXPANDED CAPACITY 4X4 HMMWV M1113	T61630	TRUCK UTILITY: S250 SHELTER CARRIER 4X4 (HMMWV)	T07543	28	X	
TRUCK UTILITY: EXPANDED CAPACITY 4X4 HMMWV M1113	T61630	TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679	44	X	
TRUCK UTILITY: EXPANDED CAPACITY 4X4 HMMWV M1113	T61630	TRUCK CARGO: DROP SIDE 5 TON 6X6	X40794	3	X	
TRUCK CARGO: MTV	T61908	TRUCK CARGO: 2 1/2 TON, M35 SERIES	MULTIPLE	40		X
TRUCK CARGO: MTV	T61908	TRUCK CARGO: 5 TON, M54 SERIES	MULTIPLE	1,261	X	
TRUCK DUMP: MTV	T64911	TRUCK DUMP: 5 TON 6X6	X43708	406	X	
TRUCK LIFT: FORK VARIABLE REACH ROUGH TERRAIN	T73347	TRUCK LIFT FORK: DED 6000 LB VARIABLE REACH RT AMMO HDLG	T48944	33	X	
TRUCK LIFT: FORK VARIABLE REACH ROUGH TERRAIN	T73347	TRUCK LIFT FORK: DSL DRVN 10000 LB CAP 48IN LD CTR ROUGH TERRAIN	T49119	249	X	
TRUCK TANK: FUEL SERVICING 2500 GALLON 8X8 HEAVY EXP MOB	T87243	TRUCK CARGO: 5 TON, M54 SERIES	MULTIPLE	15	X	
TRUCK TRACTOR: LET 6X6 66000 GVW W/W C/S	T91656	TRUCK TRACTOR: MET 8X6 75000 GVW W/W C/S	T61171	225	X	
TRUCK UTILITY: EXPANDED CAPACITY UP ARMORED HMMWV 4X4	T92446	TRUCK UTILITY: HEAVY VARIANT HMMWV 4X4 10000 GVW	T07679	4	X	
TRUCK UTILITY: EXPANDED CAPACITY UP ARMORED HMMWV 4X4	T92446	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 (HMMWV)	T92242	490	X	
TRUCK UTILITY: EXPANDED CAPACITY UP ARMORED HMMWV 4X4	T92446	TRUCK UTILITY: ARMT CARRIER ARMD 1 1/4 TON 4X4 W/W (HMMWV)	T92310	120	X	
TRUCK VAN: LMTV	T93484	TRUCK: 2 1/2 TON, M35 SERIES	MULTIPLE	119	X	
TRUCK WRECKER: MTV W/W	T94709	TRUCK WRECKER: TACTICAL 8X8 HEAVY EXPANDED MOBILITY W/W	T63093	11	X	
TRUCK WRECKER: MTV W/W	T94709	TRUCK TRACTOR WRECKER: 5 TON 6X6 W/W	X60696	1	X	
TRUCK WRECKER: MTV W/W	T94709	TRUCK WRECKER: 5 TON 6X6 W/W	X63299	133	X	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	TRAILER FLAT BED: 7 1/2 TON 4 WHEEL	T96838	9	X	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	TRAILER FLATBED: 5 TON 4 WHEEL GENERAL PURPOSE	T96883	129	X	
TRAILER CARGO: MTV W/DROPSIDES M1095	T95555	TRAILER CARGO: 1 1/2 TON 2 WHEEL	W95811	70	X	
TRAILER FLAT BED: M1082 TRLR CARGO LMTV W/DROPSIDES	T96564	TRAILER FLATBED: 5 TON 4 WHEEL GENERAL PURPOSE	T96883	25	X	
TRAILER FLAT BED: M1082 TRLR CARGO LMTV W/DROPSIDES	T96564	TRAILER CARGO: 3/4 TON 2 WHEEL	W95537	3	X	

**USAR**

Table 7

**Major Item of Equipment Substitution List**

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No
TRAILER FLAT BED: M1082 TRLR CARGO LMTV W/DROPSIDES	T96564	TRAILER CARGO: 1 1/2 TON 2 WHEEL	W95811	1,009	X	
TANK ASSEMBLY FABRIC COLLAPSIBLE: 10000 GAL PETRO	V12552	NON-STANDARD LINS	MULTIPLE	205	X	
TANK ASSEMBLY FABRIC COLLAPSIBLE: 10000 GAL PETRO	V12552	TANK FABRIC COLLAPSIBLE: PETROLEUM 10000 GAL	V15292	147	X	
TANK UNIT LIQUID DISPENSING TRAILER MOUNTING:	V19950	NON-STANDARD LINS	MULTIPLE	73	X	
TANK UNIT LIQUID DISPENSING TRAILER MOUNTING:	V19950	TANK LIQUID STORAGE METAL: PETRO PRODUCTS SKID MTD 600 GAL	V15566	127	X	
TRUCK DUMP: 5 TON 6X6 W/W	X43845	TRUCK DUMP: 5 TON 6X6	X43708	25	X	

**USAR**

Table 8

**Significant Major Item Shortages**

*NOTE: This table provides an RC top prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

<b>PR</b>	<b>Nomenclature</b>	<b>Total Req'd</b>	<b># Items Short</b>	<b>Item Cost</b>	<b>Total Shortage Cost</b>	<b>Rationale/Justification</b>
1	LIGHT MEDIUM TACTICAL VEHICLE (LMTV) 2.5 TON TRUCK (multi-LIN)	5,060	1,319	\$152,934	\$201,719,946	"# Items Short" value is the number of items not funded in FYDP.
2	MEDIUM TACTICAL VEHICLES (MTV) 5 TON TRUCK (multi-LIN)	7,532	3,557	\$183,000	\$650,931,000	"# Items Short" value is the number of items not funded in FYDP.
3	HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE (HMMWV) (Multi-LIN)	19,420	5,948	\$115,725	\$688,332,300	"# Items Short" value is the number of items not funded in FYDP.
3a	HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE (HMMWV) UP-ARMORED M1114 (T92446)	1,008	253	\$146,844	\$37,151,532	Critical shortages in Military Police units.
3b	HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE (HMMWV) UP-ARMORED M1114 (T92446)	30	30	\$146,844	\$4,405,320	Critical shortages in Chemical Corps units.
4	MULTI-BAND SUPER HIGH FREQUENCY (SHF) TERMINAL (PHOENIX) (S78466)	50	44	\$3,200,000	\$140,800,000	Required for the Integrated Signal Theater Brigade. Provides inter-theater and intra-theater range extension support.
5	ARMORED SECURITY VEHICLE: WHEELED W/MOUNT (ASV) (A93374)	256	256	\$809,500	\$207,232,000	Critical shortages in Combat Military Police and Transportation units.
6	ALL TERRAIN LIFTING ARMY SYSTEM (ATLAS) (T73347)	880	253	\$110,000	\$27,830,000	Critical shortages in company level CSS units.
7	HEMTT LOAD HANDLING SYSTEM (LHS) (T96496)	101	85	\$230,000	\$19,550,000	Fills required equipment shortages in the Improved Cargo Handling Operations and Medical Supply Companies.
8	HEMTT-BASED WATER TENDER (Z00742)	42	25	\$175,000	\$4,375,000	Critical shortages in Engineer Fire Fighting and Ammo Support Teams.
9	TACTICAL FIRE FIGHTING TRUCK (TFFT) (T82180)	76	23	\$654,583	\$15,055,409	Critical shortages in Engineer Fire Fighting and Ammo Support Teams.
10	TRAILER CARGO: FMTV W/DROPSIDES M1095/M1082 (T95555/T96554)	1,261	528	\$62,829	\$33,173,712	Critical shortages in CS/CSS units.
11	LIGHT TACTICAL TRAILER: 3/4 TON (T95992)	4,394	3,421	\$8,954	\$30,631,634	Critical shortages in CS/CSS units.

## Chapter 3

### United States Marine Corps Reserve

#### I. Marine Corps Overview

“Marines are deployed around the globe engaged in the Long War. In the Middle East and austere locations world wide, Marines and Sailors are fighting a cunning and adaptive enemy in increasingly complex forms of warfare. The Marine Corps shoulders a critical portion of the Nation’s war effort with tens of thousands of Marines serving in Iraq and many thousands more forward deployed....To fulfill our mandate to be ‘most ready when the Nation is least ready,’ we must be a ‘two fist’ force that can fight both traditional and irregular warfare.”<sup>1</sup> Scalable combined-arms teams, seamlessly integrating robust ground and aviation forces with adaptive logistics, create speed, flexibility, and agility to effectively respond to each unique emerging situation. Marines thrive in chaotic, unstable, and unpredictable environments.

Today, Marines remain forward deployed in the prosecution of the Global War on Terrorism—a war that will most likely continue past 2009.



#### A. Marine Corps Planning Guidance

The Marine Corps is “guided by the objectives articulated in the National Security Strategy, National Defense Strategy, National Military Strategy and the National Strategy for Maritime Security...and will act across the full range of military operations to secure the United States from direct attack; secure strategic access and retain global freedom of action; strengthen existing and emerging alliances and partnerships and establish favorable security conditions. Additionally, maritime forces will be employed to build confidence and trust among nations through collective security efforts that focus on common threats and mutual interests in an open, multi-polar world. To do so will require an unprecedented level of integration among our maritime forces and enhanced cooperation with the other instruments of national power, as well as the capabilities of our international partners.”<sup>2</sup> Executing these actions requires a force capable of producing decisive effects in any contingency and maintaining multiple, overlapping operations. This force must possess certain capabilities in order to preserve an enduring peace. Furthermore, this strategy requires a joint force that is not only rapidly deployable anywhere on the globe, but capable of sustained, high-intensity operations.

A critical element of America’s military continues to be the Marine Corps’ devotion to ensuring the United States is safe against terrorism and our enemies. The Marine Corps fills that expeditionary capability gap between the Special Operations Forces and the current forces of the

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<sup>1</sup> General James T. Conway “A Message from the Commandant of the Marine Corps,” United States Marine Corps Concepts and Programs 2007.

<sup>2</sup> General James T. Conway, Admiral Mike Mullen, Admiral Thad W. Allen “A Cooperative Strategy for 21<sup>st</sup> Century Seapower,” October 2007.

Army. The expeditionary capabilities of the Navy-Marine Corps team, with its combined-arms forces have consistently proven itself in combat in all environments—desert, urban, swamp, and rural, while simultaneously conducting effective peacekeeping and humanitarian operations across the globe. In a recent memo released by the Deputy Secretary of Defense on transformation priorities, transforming the Reserve component (RC) into an operational reserve is mentioned as one way to strengthen joint warfighting capabilities. Nowhere is this more evident than in the Marine Corps Reserve. Flexibility and adaptability are critical characteristics of an expeditionary force-in-readiness and are keenly demonstrated in the Navy-Marine Corps team. During this time of global unrest, these characteristics must be constantly evaluated for improvement.

The engagement of the RC in the Long War does not preclude it from being prepared for future conflicts and contingencies. The Defense Department’s current Strategic Planning Guidance directs balanced capabilities for controlling four principal challenges: Traditional, Irregular, Catastrophic, and Disruptive. Balancing these capabilities across the operational spectrum within the Marine Corps is the challenge. To maintain this critical balance, the new maritime strategy, as described in the Cooperative Strategy for a 21<sup>st</sup> Century Seapower, was published. This new vision “seeks to apply maritime power to the crucial responsibility of protecting our vital interests in an increasingly interconnected world” and is the way ahead for naval programs and operations.



## **B. Marine Corps Equipping Policy**

The Marine Corps Expeditionary Force Development System (EFDS) develops, resources, and equips the Marine Corps to ensure the National Security Strategy, NMS, and the Joint Vision are properly supported by Marine Forces. The EFDS is a single integrated system of dynamic processes and functions, which produce and sustain integrated capabilities that meet both the needs of the Marine Corps and the Combatant Commanders. EFDS is a deliberate system designed to facilitate the development and realization of military operational concepts. As such, it is streamlined and integrated to encompass all phases of concept development, to include the acquisition of essential equipment and weapons systems. The EFDS generates integrated capabilities based on fundamental concepts, which are in turn supported by interdependent processes for the development of Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF).

The Marine Corps develops an Approved Acquisition Objective (AAO) for each item in its equipment inventory from the EFDS. The AAO is all encompassing, in that it not only identifies all initial issue quantities and planned sustainability requirements for both the AC and RC, and it also includes equipment modernization plans.

The current Marine Corps equipping policy is a direct result of the Long War. In order to ensure transparent operational support to current operations in Iraq and Afghanistan and maintain a viable cost effective strategy for force rotations, the Commandant directed that equipment required for operations in both Iraq and Afghanistan remain in theater until it reaches the point of

diminishing returns. This policy has permitted the Marine Corps to focus on identifying, obtaining, and delivering the best equipment possible to forces currently in theater, while substantially reducing equipment rotation costs. This policy is implemented by the Strategic Ground Equipment Working Group (SGEWG), of which the RC is represented by a voting member from Marine Forces Reserve (MFR). This policy has resulted in the Marine Corps being able to utilize the realized savings for other critical uses.

### **C. Plan to Fill Mobilization Shortages in the RC**

The total wartime equipment requirement for MFR has its foundation in the Table of Organization and Equipment (T/O&E). The T/O&E for RC units consists of two parts: a Training Allowance (T/A) and the T/O&E delta, which would be globally sourced given the current situation. The MFR T/A represents the minimum level of equipment necessary to train RC units to a C-1 (or Defense Readiness Reporting System [DRRS]-equivalent) status in a pre-activation environment. The training time limitations that reduce the pre-activation equipment required for training, when compared to the full T/O&E, allow economies to be achieved in other areas also, such as storage space, Reserve Training Center facility requirements, maintenance requirements, and staffing levels at the Reserve Training Center (RTC). This equipping concept requires the support of the Service to ensure that the T/A is actually sourced and maintained properly and that the “delta” between a unit’s T/A and the full T/O&E is sourced in the event of mobilization and deployment. When RC units mobilize and integrate into the gaining Marine Force or Marine Air-Ground Task Force (MAGTF), in-theater assets, pre-positioned equipment and globally-sourced equipment are used to source equipment shortfalls.

The Long War has placed a heavy demand and toll on equipment and “to meet the demands of the Long War, we must properly reset the force in order to simultaneously fight, train, and sustain our Corps.”<sup>3</sup> To mitigate these demands, the Marine Corps and the Marine Corps Reserve have relied heavily on



Supplemental and NGREA funding. The Marine Corps identified remaining RC unit T/A shortfalls essential to reset the Reserve Force. The Marine Corps also remains dependent on continued National Guard and Reserve Equipment Appropriations (NGREA) to fill critical and emerging equipment needs. These funding vehicles have assisted the RC in complying with the Commandant of the Marine Corps’ priority of resetting and modernizing the force.

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<sup>3</sup> General James T. Conway “Commandant’s Planning Guidance,” December 2006.

## **D. Sourcing the Training Allowance**

The Marine Corps Reserve has identified current T/A deficiencies in the baseline program, the FY 2007 Unfunded Priorities List, the FY 2007 National Guard & Reserve Equipment Appropriations request, the FY 2007 Supplemental request, and the FY 2008 Supplemental request.

If funding is received and executed as currently planned, all current RC T/A deficiencies will be filled. However, the USMC lives in a far more dynamic strategic environment today than in the past; an environment in which T/As change more often. The National Guard & Reserve Equipment Appropriation will source replenishment and replacement of existing equipment, unforeseen new warfighting equipment requirements, and continued [non-T/O&E] training and information management innovations.

For non-T/O&E training systems and simulators, the Marine Corps Reserve continues to work with the AC to define the requirement and identify additional funding needs. As of this date, RC training systems and simulator requirements have been identified and, in conjunction with the AC, are included in the current POM process.

## **E. Initiatives Affecting RC Equipment**

### **1. Marine Aviation Plan**

The 4th Marine Aircraft Wing (MAW) is undergoing a transformation in accordance with the Marine Aviation Plan. The Aviation Plan downsizes the RC MAW, decommissions flying squadrons, and places others in a cadre status. The major events forthcoming are:

In FY 2007, VMFA-134 (F/A-18) at Marine Corps Air Station (MCAS) Miramar was placed into cadre status. Tactical Air Command and Control (TACC) Battle Staffs West and East were established within Marine Air Control Group-48, with TACC Battle Staff West located at MCAS Miramar and TACC Battle Staff East located at Naval Station Great Lakes.



During FY 2008, VMFA-142 (F/A-18) at Joint Reserve Base Ft. Worth (relocated from NAS Atlanta) will be placed into cadre status. The MAG-42 Headquarters, MALS-42, and HMH-769 (CH-53) will be deactivated in FY 2008, and HMH-772 (CH-53) will become HMH-772(-) with six aircraft remaining.



During FY 2009, the MAG-46 Headquarters and HMLA-775 (UH/AH-1) will be deactivated, and Marine Air Control Group-48 will establish a Site Support detachment at MCAS Miramar.

During FY 2011, VMU-4 (unmanned aerial vehicle) will be established at a location yet to be determined.

## 2. T/O&E Review

The Marine Corps is currently conducting a T/O&E review to identify future equipment needs for all combatant force units, and new T/O&E allowances may result in RC T/A changes.

### F. Marine Corps Plan to Achieve Full Compatibility between AC and RC

Given the flexibility and organizational agility required in the Long War, it is more important than ever that our AC and RC warfighting capabilities achieve full compatibility. The Marine Corps recognizes the necessity of interoperable AC and RC forces, and continues to pursue a policy of integrated training, horizontal fielding of new equipment, and synchronization of



deployment practices. These factors enable the Marine Corps Reserve to activate, conduct pre-deployment training, deploy, accomplish the mission, re-deploy, and deactivate within 12 months. The practice of using 12-month activations with seven-month deployments has contributed to sustaining the provision of RC capabilities and assisted in the reconstitution of our RC units. Activated RC units follow the same seven-month “boots-on-ground” deployment policy as our AC forces. This activation/deployment “business model”

has allowed the Marine Corps to progress towards full compatibility between our AC and RC.

## II. Marine Corps Reserve Overview

### A. Current Status of the Marine Corps Reserve

#### 1. General Overview

The Marine Corps Reserve is a force of 39,600 RC personnel spread across 185 sites in 48 states, the District of Columbia, and Puerto Rico. MFR stands always “Ready, Willing, and Able” to augment and reinforce AC forces for employment across the complex spectrum of crises and conflicts. In addition to the Marine Corps Reserve units, Individual Ready Reserve (IRR) Marines, Individual Mobilization Augmentees (IMAs), and Retired Marines fill the critical gaps in our nation’s defense and are deployed worldwide, to include the United States, supporting all aspects of the GWOT.

Reserve Marine contributions to the GWOT are twofold. They possess not only Marine Corps skills but also civilian training and experience. The police officers, firefighters, engineers, lawyers, skilled craftsmen, business executives and college students, who fill the Reserve ranks, greatly enhance the capabilities of the Total Force.

The effectiveness of the RC lies in its ability to seamlessly integrate with the AC. The training, leadership, and quality of life of our RC remain Marine Corps priorities, as does the judicious employment of Reserve Marines as we continue to meet national security objectives.



#### 2. Status of Equipment

The Marine Corps RC and AC face two primary equipping challenges:

- Supporting and sustaining our forward deployed forces in the Long War and
- Adequately equipping and modernizing the force to prepare for future challenges.

Marine Corps priorities in addressing the first challenge are: (1) to provide every Marine in a deploying Reserve unit with the latest generation of individual combat and protective clothing and equipment; (2) to procure essential command and control equipment necessary to employ common tactics, techniques, and procedures (TTPs) in all AC and RC units of a given type; (3) to procure simulation devices that challenge our Marines to perform at higher levels and

#### Top USMCR Equipping Challenges

- Outfitting deploying Marines with the most recently fielded individual combat clothing and equipment provided to U.S. Forces in each theater.
- Providing RC units with the “right amount” of equipment to effectively train their Marines in a pre-activation environment.
- Achieving modernization initiatives and maintaining equipment readiness with limited resources.

maintain an adaptive training environment; and (4) to provide adequate funding to Operation and Maintenance accounts. Our priorities in support of the second challenge—equipping and modernizing the force—include: filling our remaining command and control equipment shortfalls; ensuring all T/A quantities are acquired and fielded to RC units; fielding Light Armored Vehicles to outfit two new Light Armored Reconnaissance Companies; and adequately funding upgrades to our legacy aircraft. Due to increased reliance on our RC in the Long War, the need to continue horizontal fielding of equipment across the Total Force is imperative.

### **a. Equipment On-Hand**

The Marine Corps Reserve T/A (on-hand equipment) is reviewed annually and assigned to RTCs based on the quantity and type of equipment needed to meet training requirements. *Table 1* provides specific information on the total Marine Corps Reserve equipment inventories, including both the T/A and In-Stores assets and required equipment quantities. In some instances, the In-Stores equipment on-hand reflects materiel that is Not Ready For Issue (NRFI) due to lack of depot level maintenance funding. In-Stores assets are available to any unit placing a valid requisition, not just MFR units. Therefore, reliance on receiving equipment from In-Stores assets can only be minimal and the numbers reflected in *Table 1*, although accurate, are not reserved solely for MFR forces.



### **b. Average Age of Major Items of Equipment**

*Table 2* provides the average age of selected major items of equipment at the start of FY 2008.

### **c. Current Active-Reserve Compatibility of Equipment**

Although current overall AC and RC equipment compatibility is satisfactory, areas of incompatibility exist. Generally, RC units do not possess adequate quantities of the most current digital communications equipment, primarily those used for intra-squad or small-unit, tactical-level communications (Integrated Intra Squad Radio (IISR), AN/PRC-148 Multiband Inter/Intra Team Radio, and AN/PRC-150 Tactical Manpack Radio). Fielding of tactical radio systems is scheduled to start in FY 2008 and will continue until the digital communications equipment deficiencies are eliminated.

While AC and RC equipment compatibility is a worthy objective, especially in command and control systems, it is difficult to achieve for the following reasons: the continuing



high demand for equipment; attrition of equipment through wear, damage, and destruction; the procurement over the past several years of small quantities of new equipment through the Urgent Universal Need Statement/ONS (non-Program of Record) process to meet mission needs; and the need to utilize funding for the highest priority needs at any given moment. The impact of NGREA, in addressing this area, is visible and extremely positive as outlined on pages 3-8 and 3-9 of this report.

#### **d. Maintenance Issues**

Maintenance of equipment remains one of the Marine Corps Reserve's top priorities. Equipment must be maintained properly if it is to be available to meet training and operational deployment requirements. Accordingly, sufficient funding must be programmed to sustain the materiel readiness and capability of all equipment, legacy systems and new acquisitions. As illustrated in *Figure 3-1*, our equipment is currently maintained at the required level of readiness.

#### **e. Modernization Programs and Shortfalls**

The following paragraphs highlight essential Marine Corps Reserve equipment priorities. While the need for consistency in articulating requirements is understood, these priorities may change over time due to the continually-changing nature of warfighting requirements, shortfalls being satisfied by the various funding sources, and training innovations, to name a few.

- Tactical Communications/Command and Control. As identified earlier, one of the biggest challenges facing RC units in current operations is the ability to effectively communicate within a squad, convoy, patrol, or other independent unit. Modern communications systems provide secure, interoperable communications within and between tactical units, and satellite communications capabilities for remotely operating units.
- Aviation Communications. Modernizing our KC 130T communications equipment to ensure compatibility with the AC and other Service aircraft is critical because fielding of the KC-130Js is not scheduled to begin until FY 2013. Through the use of NGREA, the Marine Corps Reserve is procuring a common communications suite that will allow compatible communications with the AC and other Services.
- Training and Training Simulators. The Marine Corps Reserve is striving to incorporate the latest technological innovations to create effective training and education opportunities for Reserve Marines to increase their ability to effectively integrate with their active duty counterparts. Fielding modern, state-of-the-art training systems is part of this effort. Through the use of NGREA, the Marine Corps Reserve is procuring MTV Replacement-Operator Driving Simulator (MTVR-ODS), Virtual Combat Convoy Trainer-Marine (VCCT-M), and Deployable Virtual Training Environment (DVTE) simulation trainers.



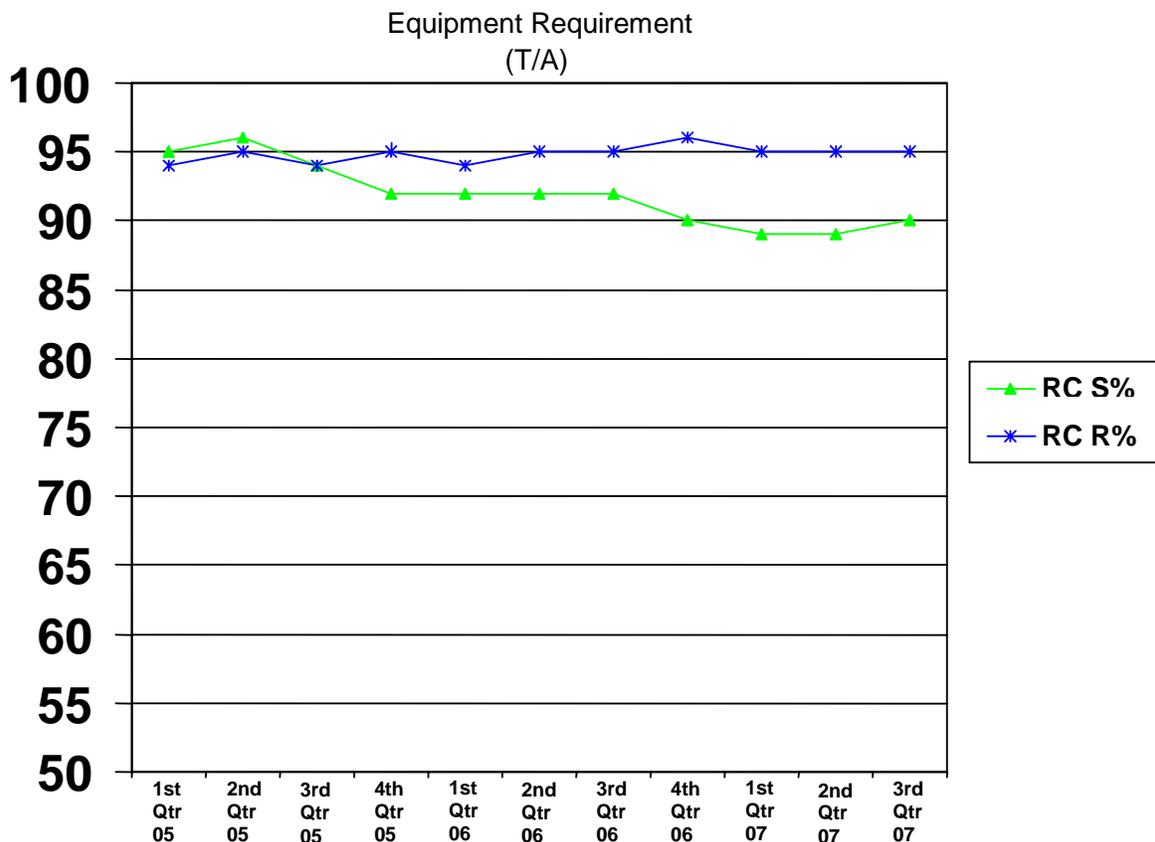
- Aviation Modernization. The Marine Aviation Plan, as previously identified, will reduce 4<sup>th</sup> Marine Aircraft Wing inventory to one F/A-18 squadron. It is, therefore, incumbent on the MFR to ensure this remaining squadron is equipped with the latest technology and is fully compatible with the AC. The Litening Pod is a critical targeting tool necessary for predeployment training and future deployments; in fact, the Litening Pod is required equipment for the aviation forces currently deployed in support of OIF and OEF. The Marine Corps Reserve is procuring this equipment through the use of NGREA.



**f. Overall Equipment Readiness**

Based upon the Training Allowance (T/A), the general state of USMCR ground equipment readiness, as shown in Figure 3-1, remains above minimum prescribed levels. To describe the state of equipment readiness, two variables are used. The Supply Equipment On-hand, or “S” rating, is the percentage of authorized on-hand equipment as compared to the total T/A authorized in the USMCR. The Equipment Readiness, or “R” rating, is the total percentage of equipment on-hand that is mission capable. The Marine Corps Reserve is prepared to augment the AC quickly and effectively as it demonstrated during OEF and OIF.

*Figure 3-1. USMCR Ground Equipment Readiness*



## B. Changes Since Last NGRER

The NGREA continues to provide much needed procurement support. In FY 2006, NGREA provided \$30M; enabling the Marine Corps Reserve to respond to the pressing requirements of the individual Marine, the Total Force, and Combatant Commanders. In FY 2007, NGREA provided \$35M. The consistent level of NGREA funding enabled the USMCR to craft a FY 2007 procurement plan consistent with that of FY 2006, specifically procurement of complementary command and control systems, training enhancement devices, and warfighting equipment. In the C<sup>2</sup> category, FY 2007 NGREA procurement items include: Secure Wide Area Network (SWAN) Package, Logistics Secure Wide Area Network (LSWAN) Package, Defense Advanced Global Positioning System Receiver (DAGR), Sensor Mobile Monitoring Systems (2nd Generation), KC-130T AN/ARC-210 Radio Systems, and a communications package. In the training enhancement category, FY 2007 NGREA will enable us to procure two Virtual Combat Convoy Systems (VCCS), ten Medium Tactical Vehicle Replacement—Training Systems (MTVR-TS), five Indirect Fire—Forward Air Control Trainers (I-FACT), and nine Deployable Virtual Training Environment (DVTE) suites. These simulators and trainers provide realistic convoy crew training and computer-generated video simulation training for our Marines. In the warfighting equipment category, FY 2007 NGREA procurement items include Litening II Targeting Pods and an UC-12 operational support aircraft. NGREA remains a critical element of procurement-related resourcing; it provides us with the necessary funds to establish and maintain interoperability and compatibility with the AC. In the FY 2008 NGREA, the Marine Corps Reserve will procure training simulators, aircraft modernization equipment, a targeting identification device, and an unmanned ground sensor suite.



## C. Future Years Program (FY 2009–FY 2011)

### 1. FY 2011 Equipment Requirements

*Table 1* provides projected FY 2009-2011 major equipment inventories and requirements.

### 2. Anticipated New Equipment Procurements

#### a. Global Combat Support System–Marine Corps (GCCS-MC)

GCCS-MC is a portfolio of systems that supports the logistics elements of command and control, joint logistics interoperability, and secure access to and visibility of logistics data. It will also provide a cross domain solution required for the transfer of data from the NIPR to the SIPR network and will connect to the tactical data network and communications systems. It will replace 30-year-old legacy “stovepiped” information technology such as the Supported Activities Supply System (SASSY), Marine Corps Integrated Maintenance Management System (MIMMS), and Asset Tracking, Logistics, and Supply System (ATLASS I)



with a system that will provide integrated, distributed, web-based, off-the-shelf solutions that enable improved logistics chain effectiveness/efficiency and provide timely/actionable combat support information. Reserve Forces are scheduled to be fielded the GCCS-MC during FY 2009.

### **b. Integrated Intra Squad Radio (IISR)**



The IISR provides small, lightweight, hand held tactical radios to infantry squads and fire teams facilitating squad command and control. The radio will facilitate many other mission requirements, to include combined infantry and mechanized/armor operations, coalition operations, force protection, logistics support, and command and control during limited visibility operations. Reserve Forces are scheduled to start receiving the IISR during FY 2008 with Full Operational Capability (FOC) projected during FY 2010.

### **c. Support Wide Area Network (SWAN)**

The Marine Corps SWAN is an IP-based communications system that uses commercial satellite terminals, network baseband equipment, wireless systems, software and support personnel to provide Non-secure Internet Protocol Router (NIPR) and Secure Internet Protocol Router (SIPR) communications for forward-deployed Marines. 4<sup>th</sup> Marine Aviation Wing achieved FOC during FY 2008. The Marine Logistics Group will be fielded its Logistics SWANs (LSWAN) starting the 2<sup>nd</sup> qtr FY 2008 with FOC projected for the beginning of FY 2009.



## **3. Anticipated Transfers from AC to RC**

There are no known future transfers at this time.

## **4. Anticipated Withdrawals from RC Inventory**

As discussed earlier, the latest Marine Corps Aviation Plan includes the withdrawal from the RC in FY 2008 of 13 AH-1W attack helicopters, 9 UH-1N utility helicopters, 11 CH-53E cargo helicopters, and 8–10 F/A-A/A+ fighter aircraft. Currently, no further RC major equipment withdrawals are planned for FY 2009-FY 2011.



## **5. Equipment Shortages and Modernization Shortfalls at the end of FY 2011**

*Tables 1 and 8* provide equipment inventories, shortfalls, and modernization requirements for the Marine Corps Reserve at the end of FY 2011.

## **D. Summary**

The Marine Corps Reserve remains ready, willing and able to answer the Nation's call to duty, as demonstrated by the mobilization and integration of the RC into the AC throughout the Long War. Our greatest asset is our outstanding young men and women in uniform, and it is critical they continue to receive the equipment and support necessary to complete their missions. The Marine Corps and its Reserve is a model for Total Force integration and expeditionary capability. With the continuing support of the Administration and the Congress, the USMCR will forge ahead to meet the high expectations of the American public.



**USMCR**

Table 1

**Consolidated Major Item Inventory and Requirements**

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Unit Cost</b>	<b>Begin FY 2009 QTY O/H</b>	<b>Begin FY 2010 QTY O/H</b>	<b>Begin FY 2011 QTY O/H</b>	<b>End FY 2011 QTY O/H</b>	<b>End FY 2011 QTY REQ</b>
<b>AIRCRAFT</b>							
HELICOPTER, UTILITY, UH-1N	UH-1N	\$6,866,000	9	9	9	9	9
HELICOPTER, CARGO, CH-46E	CH-46E	\$14,568,000	27	27	27	27	27
HELICOPTER, CARGO, CH-53E	CH-53E	\$36,615,000	6	6	6	6	6
AIRCRAFT, ATTACK, AH-1W	AH-1W	\$18,411,000	18	18	18	18	18
AIRCRAFT, FIGHTER/ATTACK, F/A-18A	F/A-18A	\$50,983,000	14	14	14	14	14
AIRCRAFT, FIGHTER, F-5F	F-5F	\$14,420,000	1	1	1	1	1
AIRCRAFT, FIGHTER, F-5N	F-5N	\$683,000	12	12	12	12	12
AIRCRAFT, REFUELING/CARGO, KC-130T	KC-130T	\$44,220,000	28	28	28	28	28
AIRCRAFT, UTILITY/CARGO, UC-12B	UC-12B	\$8,000,000	2	2	2	2	2
AIRCRAFT, UTILITY/CARGO, UC-35C/D	UC-35	\$7,953,000	5	5	5	5	5
<b>COMMUNICATIONS/ELECTRONICS</b>							
THEATER BATTLE MGMT CORE SYS, AN/TYY-2	A0013	\$1,475,935	1	1	1	1	1
DIRECT AIR SUPPORT CENTRAL AIRBORNE SYSTEM (DASCAS)	A0020	\$500,000	1	1	1	1	2
COMM DATA LINK SYSTEM, TYQ-101A	A0021	\$324,501	1	1	1	1	1
COMM DISTRIBUTION SYSTEM (CDS) V1	A0023	\$1,089,633	1	1	1	1	1
COMM DISTRIBUTION SYSTEM (CDS) V2	A0024	\$319,044	4	4	4	4	2
COMM PLATFORM, AIR DEFENSE (ADCP)	A0025	\$907,000	3	3	3	3	3
GLOBAL BROADCAST SVC (GBS), AN/TSR-7	A0080	\$99,000	0	0	0	0	10
RADIO SET, AN/TRC-209	A0139	\$47,828	1	1	1	1	0
CENTRAL OFFICE, TELEPHONE, AN/TTC-42(V)	A0248	\$1,549,380	9	9	9	9	10
COMBAT OPERATIONS CENTER, SET III	A0254	\$1,139,685	2	2	2	2	5
COMBAT OPERATIONS CENTER, SET IV	A0255	\$790,502	5	5	5	5	20
DISMOUNTED DATA AUTOMATED COMM TERMINAL (DACT), AN/PSC-13	A0285	\$10,000	0	0	0	0	531
MOUNTED DACT	A0425	\$16,940	0	0	0	0	259
DECODER GROUP, AN/UPA-60(V)2	A0465	\$36,034	14	14	14	14	14
DIGITAL TECHNICAL CONTROL (DTC), FACILITY, AN/TSQ-227	A0499	\$1,213,000	4	4	4	4	1
SAT TERMINAL HUB, AN/USC-65(V)1	A0806	\$1,500,000	1	1	1	1	1
SAT TERMINAL MINI-HUB, AN/USC-65(V)2	A0807	\$900,000	1	1	1	1	1
SURVEY SYSTEM, NAVIGATION, AN/GSN-14	A0808	\$179,375	5	5	5	5	5
COMM TERMINAL, AN/TSC-93C(V)1	A0814	\$825,000	5	5	5	5	5
COMMAND SYS TACTICAL, AN/UYQ-91(V)1	A0872	\$51,900	16	16	16	16	22
INTEL OPS SERVER, AN/UYQ-91 (V)2	A0873	\$72,800	15	15	15	15	3
INTERROGATOR SET	A0880	\$124,087	6	6	6	6	6
JOINT TACTICAL DIGITAL LINK-16, AN/YRC-107	A0882	\$683,000	1	1	1	1	4
INTEL OPS WORKSTATION, AN/UYQ-88	A0932	\$30,000	205	205	205	205	57
MONITOR, PORTABLE, AN/USQ-121	A1221	\$28,000	12	12	12	12	12
EPLRS NETWORK MANAGER, AN/TSQ-158A	A1225	\$5,889	7	7	7	7	22

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Table 1

## Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
NAV SET, SATELLITE SIGNALS, AN/PSN-13(A)	A1260	\$4,742	1,039	1,039	1,039	1,039	1,013
COUNTER INTEL & HUMINT EQ SET (CIHEP)	A1280	\$1,500,000	0	0	0	0	41
ANTENNA, LHGXA, AS-4429	A1380	\$318,544	0	0	0	0	2
RADAR SET, FIRE FINDER, AN/TPQ-36/46	A1440	\$7,500,000	5	5	5	5	5
RADAR SET, AN/TPS-63B	A1500	\$377,777	2	2	2	2	2
RADAR SET, LW3D, AN/TPS-59(V)3	A1503	\$3,217,555	2	2	2	2	2
RADIO SET, AN/GRC-171B(V)4	A1818	\$55,874	83	83	83	83	95
RADIO TERMINAL SET, AN/MRC-142B	A1954	\$289,603	1	1	1	1	1
RADIO TERMINAL SET, AN/MRC-142A	A1955	\$218,192	59	59	59	59	59
RADIO SET, AN/MRC-145A	A1957	\$43,986	313	313	313	313	344
RADIO SET, AN/PRC-150	A2042	\$19,247	291	291	291	291	291
RADIO SET, URBAN, AN/PRC-148(V)1	A2043	\$7,115	1,107	1,107	1,107	1,107	1,171
RADIO SET, MARITIME, AN/PRC-148(V)1	A2044	\$7,431	226	226	226	226	226
RADIO SET, FALCON II, AN/PRC-117F	A2068	\$27,450	220	220	220	220	0
RADIO SET, AN/PRC-119A	A2070	\$10,117	1,349	1,349	1,349	1,349	1,435
RADIO SET, AN/PRC-119D	A2073	\$14,000	186	186	186	186	0
RADIO SET, AN/VRC-88D	A2074	\$15,145	428	428	428	428	428
RADIO SET, AN/VRC-89D	A2075	\$12,000	97	97	97	97	38
RADIO SET, AN/VRC-90D	A2076	\$12,000	21	21	21	21	14
RADIO SET, AN/VRC-91D	A2077	\$14,000	51	51	51	51	0
RADIO SET, AN/VRC-92D	A2078	\$16,000	64	64	64	64	29
RADIO SET, AN/PRC-119F	A2079	\$4,346	828	828	828	828	676
RADIO SET, EPLRS, AN/SQ-2C	A2152	\$41,336	204	204	204	204	321
RADIO SET, AN/VRC-88	A2167	\$12,519	386	386	386	386	445
RADIO SET, AN/VRC-89	A2168	\$22,822	88	88	88	88	74
RADIO SET, AN/VRC-90	A2169	\$13,178	53	53	53	53	137
RADIO SET, AN/VRC-91	A2170	\$23,249	2	2	2	2	0
RADIO TERMINAL SET, AN/TRC-170	A2179	\$1,000,000	24	24	24	24	24
SENSOR SYSTEM, MONITOR, AN/MSC-77	A2306	\$657,000	3	3	3	3	3
SECTOR ANTI-AIR WARFARE FAC, AN/TYQ-87	A2390	\$427,000	2	2	2	2	2
SWITCHING UNIT, TELEPHONE, SB-3865	A2508	\$418,406	62	62	62	62	62
TACTICAL AIR OPS MODULE, AN/TYQ-23	A2525	\$8,054,500	6	6	6	6	6
TACTICAL DATA NETWORK, AN/TSQ-222	A2535	\$650,000	8	8	8	8	3
TACTICAL DEFENSE MSG SYS, AN/TRQ-235	A2536	\$45,000	0	0	0	0	6
DATA DISTRIBUTION SYSTEM (DDS), TACTICAL SERVER, TSQ-228(V)1	A2538	\$99,000	45	45	45	45	45
TACTICAL COMMAND SYSTEM, AN/USC-55A	A2551	\$280,000	3	3	3	3	4
ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEMS, AN/GYK-60	A2555	\$45,200	136	136	136	136	136
TARGET LOCATOR, DESIGNATOR & HAND OFF SYSTEM (TLDHS), AN/PSQ-19A	A2560	\$25,000	1	1	1	1	124
SAT COM TERMINAL, SMART-T, AN/TSC-154	A3232	\$825,000	10	10	10	10	6
UAV SYSTEM, DRAGON EYE	A3252	\$124,273	0	0	0	0	71
SENSOR, GROUND, AN/GSQ-257	A3255	\$867,264	4	4	4	4	3
COMM INTERFACE SYSTEM, AN/MRQ-12(V)1	A3270	\$326,000	13	13	13	13	11
INTERROGATOR COMPUTER, TSEC/KIR-1C	A8018	\$2,067	34	34	34	34	21
TRANSPONDER COMPUTER, TSEC/KIT-1C	A8019	\$1,438	14	14	14	14	37
ELECTRONIC KEY GENERATOR, KG-40A/P	A8038	\$13,714	14	14	14	14	14

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
CONTROL GROUP, RADIO, OK648/U	A8100	\$5,901	591	591	591	591	683
<b>ENGINEER</b>							
AIR CONDITIONER, 60HZ, 9K BTU	B0001	\$5,140	30	30	30	30	46
AIR CONDITIONER, 60HZ, 18K BTU, F18H-38A	B0002	\$4,938	42	42	42	42	64
AIR CONDITIONER, 60HZ, 60K BTU, FOOT-2HS	B0007	\$12,889	18	18	18	18	12
AIR CONDITIONER, 60/400HZ, 18K BTU	B0012	\$5,860	211	211	211	211	230
AIR CONDITIONER, 60HZ, 36K BTU	B0014	\$9,950	13	13	13	13	468
BOAT, BRIDGE ERECTION, USCSBMK2	B0114	\$249,187	32	32	32	32	20
BRIDGE, ERECTION SET, (MGB)	B0120	\$488,354	10	10	10	10	6
BRIDGE, MEDIUM GIRDER (MGB), DRY GAP	B0152	\$964,515	4	4	4	4	12
BRIDGE, FLOATING RIBBON, 70-TON	B0155	\$3,568,000	2	2	2	2	2
CONTAINER HANDLER, ROUGH TERRAIN	B0392	\$525,000	0	0	0	0	11
CRANE, HIGH SPD, HIGH MOB, HSHMC	B0443	\$198,200	22	22	22	22	23
CRANE, ROUGH TERRAIN, LIGHT	B0446	\$67,000	57	57	57	57	45
MINE DETECTING SET, PORTABLE, AN/PSS-12	B0475	\$2,450	40	40	40	40	138
MINE DETECTING SET, AN/PSS-14	B0476	\$19,300	123	123	123	123	124
EXCAVATOR, ARMORED COMBAT, M9 ACE	B0589	\$887,050	7	7	7	7	21
FUEL DISPENSING SYS, AIRFIELD, M1966	B0675	\$331,061	0	0	0	0	3
FUEL SYSTEM, AMPHIBIOUS ASSAULT, M69HC	B0685	\$1,238,679	0	0	0	0	3
GENERATOR, 3KW, 60HZ, MEP-016B/MEP-831A	B0730	\$9,922	321	321	321	321	293
GENERATOR, 10KW, 60HZ, MEP-003A/803A	B0891	\$14,345	210	210	210	210	308
GENERATOR, 10KW, 400HZ, MEP-112A/813A	B0921	\$15,304	8	8	8	8	8
GENERATOR, 30KW, 60HZ, MEP-005A/805A/B	B0953	\$26,705	223	223	223	223	230
GENERATOR, 30KW, 400HZ, MEP-114A/815A/B	B0971	\$24,334	7	7	7	7	4
GENERATOR, 2KW, 60HZ, MEP-531A	B0980	\$5,262	58	58	58	58	0
GENERATOR, 60KW, 400HZ, MEP-115A/816A/B	B1016	\$28,425	22	22	22	22	22
GENERATOR, 60KW, 60HZ, MEP-006A/806A	B1021	\$25,073	153	153	153	153	156
GENERATOR, 100KW, 60HZ, MEP-007A/B/807A	B1045	\$67,000	26	26	26	26	33
GRADER, ROAD, MOTORIZED, 130-G	B1082	\$72,000	20	20	20	20	20
HELICOPTER EXPEDIENT REFUEL SYS (HERS)	B1135	\$101,863	4	4	4	4	3
LINE CHARGE LAUNCH KIT, TRAILER MTD	B1298	\$7,000	41	41	41	41	50
FUEL PUMP MODULE (SIXCON)	B1580	\$23,350	60	60	60	60	114
SCRAPER-TRACTOR, WHEELED, 621B	B1922	\$552,199	6	6	6	6	12
STORAGE, TANK, MODULE, FUEL (SIXCON)	B2085	\$6,948	160	160	160	160	357
STORAGE, TANK, MODULE, WATER (SIXCON)	B2086	\$5,524	276	276	276	276	276
SWEEPER, ROTARY, VEHICLE MOUNTED	B2127	\$130,000	7	7	7	7	6
TRACTOR, FT, T-5	B2460	\$80,233	26	26	26	26	31
TRACTOR, FT, MED, CAT D7G	B2462	\$314,000	69	69	69	69	58
LOADER BACKHOE, CAT420D	B2483	\$78,000	31	31	31	31	33
TRUCK, FORKLIFT, EXTENDED BOOM, MMV	B2561	\$85,556	93	93	93	93	102
ROUGH TERRAIN FORKLIFT (LRTF), TX51-19M	B2566	\$70,000	83	83	83	83	97
TRACTOR, WHLD, MP (TRAM)-644E	B2567	\$52,990	105	105	105	105	105
WELDING SHOP, MC TACTICAL (MCTWS)	B2685	\$42,958	69	69	69	69	33
<b>GENERAL SUPPLY</b>							
UNDERWATER BREATHING APPARATUS, MK25	C4185	\$4,963	120	120	120	120	120
PROPULSION SYS, SMALL CRAFT J55APRL	C4548	\$7,000	38	38	38	38	56

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
PARACHUTE, PERSONNEL, 11-1-7400	C5590	\$4,596	0	0	0	0	908
PARACHUTE, PERSONNEL, MC-5	C5649	\$16,000	157	157	157	157	266
RAIDING CRAFT, COMBAT, INFLATABLE	C5901	\$16,745	67	67	67	67	60
SHOP EQUIP, MAINTENANCE CONTACT VEH	C7033	\$72,357	32	32	32	32	27
<b>MOTOR TRANSPORT</b>							
TRAILER, 50-TON, M870	D0002	\$45,600	5	5	5	5	0
TRUCK, TRACTOR, 7-TON, MK-31	D0009	\$270,105	0	0	0	0	64
TRUCK, UTILITY, HMMWV, M1152	D0022	\$62,665	241	241	241	241	173
TRUCK, CARGO, 7-TON, MTRV, MK-23/MK-25	D0198	\$227,989	759	759	759	759	749
FRONT POWER UNIT, LOG VEH SYS, MK48	D0209	\$189,000	148	148	148	148	142
TRUCK, AVIATION REFUELER CAPABILITY	D0210	\$176,000	12	12	12	12	9
SEMITRAILER, 5,000 GAL REFUELER, M970	D0215	\$214,064	38	38	38	38	50
SEMITRAILER, 40-TON LOW-BED, M870	D0235	\$61,710	40	40	40	40	53
TRAILER, CONTAINER HAULER, MK14	D0876	\$65,000	72	72	72	72	213
TRAILER, WRECKER/RECOVERY, MK15	D0877	\$192,000	17	17	17	17	16
TRAILER, 5TH WHEEL, MK16	D0878	\$81,000	48	48	48	48	39
TRAILER, CARGO, 20-TON, W/CRANE, MK17	D0879	\$145,000	102	102	102	102	57
TRAILER, WATER TANK, 400-GAL, M149A2	D0880	\$12,955	281	281	281	281	258
TRAILER, RIBBON, MK18/MK18A1	D0881	\$123,759	30	30	30	30	36
TRUCK, CARGO, 22.5-TON, LVSR-MK18	D0886	\$319,529	0	0	0	0	195
TRUCK, TRACTOR, LVSR-MK16	D0887	\$330,000	0	0	0	0	52
HMMWV AMBULANCE, 4-LITTER, M997	D1001	\$113,998	100	100	100	100	87
HMMWV AMBULANCE, 2-LITTER, M1035	D1002	\$68,212	59	59	59	59	48
TRUCK, CARGO, 7-TON, MK-27/MK-28	D1062	\$250,424	244	244	244	244	115
TRUCK, AIRCRAFT CRASH/STRUCTURE FIREFIGHTING, A/S32P-19A	D1064	\$162,561	20	20	20	20	18
TRUCK, DUMP, 7-TON, MK-29/MK-30	D1073	\$238,105	72	72	72	72	80
HMMWV TOW CARRIER, M1045/M1046	D1125	\$79,188	197	197	197	197	98
TRUCK, TRACTOR, 5-TON, 6X6, M818/M931	D1134	\$74,834	12	12	12	12	0
HMMWV CARGO/TROOP CARRIER, M998	D1158	\$60,409	1,764	1,764	1,764	1,764	1,613
HMMWV ARMT CARRIER, M1043/M1044	D1159	\$77,522	354	354	354	354	339
INTERIM FAST ATTACK VEHICLE (IFAV)	D1160	\$69,400	10	10	10	10	10
TRUCK, WRECKER, MTRV, MK-36	D1213	\$531,720	47	47	47	47	50
<b>ORDNANCE/WEAPONS</b>							
BRIDGE, SCISSOR FOR AVLB	E0149	\$92,939	4	4	4	4	4
BRIDGE LAUNCHER, M60A1	E0150	\$527,126	4	4	4	4	4
AIMING CIRCLE, M2A2	E0180	\$3,725	136	136	136	136	119
COMMAND LAUNCH UNIT, JAVELIN M98A1	E0207	\$126,824	72	72	72	72	72
SNIPER RIFLE, DMR, M14	E0311	\$4,025	24	24	24	24	6
NIGHT VISION EQUIP SET, AN/UAS-12A/C	E0330	\$116,014	187	187	187	187	118
HOWITZER, MEDIUM, TOWED 155MM, M198	E0665	\$1,032,337	83	83	83	83	66
HOWITZER, LIGHT WEIGHT, TOWED, M777	E0671	\$1,600,000	0	0	0	0	48
INTERROGATOR SET, AN/GSX-1, STINGER	E0726	\$19,121	15	15	15	15	0
INTERROGATOR SET, AN/PPX-3B, STINGER	E0727	\$38,679	92	92	92	92	0
ASSAULT AMPHIBIOUS VEHICLE (AAV), COMMAND/COMMUNICATIONS, AAVC7A1	E0796	\$2,000,000	5	5	5	5	5
AAV, PERSONNEL, AAVP7A1	E0846	\$2,000,000	75	75	75	75	103
AAV, RECOVERY, AAVR7A1	E0856	\$2,000,000	11	11	11	11	8

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**Consolidated Major Item Inventory and Requirements**

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Unit Cost</b>	<b>Begin FY 2009 QTY O/H</b>	<b>Begin FY 2010 QTY O/H</b>	<b>Begin FY 2011 QTY O/H</b>	<b>End FY 2011 QTY O/H</b>	<b>End FY 2011 QTY REQ</b>
ROCKET LAUNCHER, 83MM, MK153	E0915	\$7,833	234	234	234	234	234
TOW LAUNCHER, M220E4	E0935	\$133,000	114	114	114	114	114
LIGHT ARMORED VEHICLE (LAV), ANTI-TANK, LAV-AT	E0942	\$840,637	16	16	16	16	16
LAV, COMMAND/CONTROL, LAV-C2	E0946	\$592,911	8	8	8	8	8
LAV, 25MM, LAV-25	E0947	\$543,918	60	60	60	60	60
LAV, LOGISTICS, LAV-L	E0948	\$386,380	24	24	24	24	16
LAV, MORTAR, LAV-M	E0949	\$435,797	8	8	8	8	8
LAV, MAINT/RECOVERY, LAV-R	E0950	\$431,368	8	8	8	8	6
MACHINE GUN, .50 CAL, BROWNING M2	E0980	\$8,118	551	551	551	551	499
MACHINE GUN, .50 CAL, M48	E0984	\$9,152	50	50	50	50	192
MACHINE GUN, 7.62MM, M240G	E0989	\$6,578	851	851	851	851	820
MACHINE GUN, 40MM, MK-19 MOD 3	E0994	\$15,320	495	495	495	495	505
MACHINE GUN, 40MM, UGWS, MK19 MOD3	E0997	\$11,304	48	48	48	48	103
MACHINE GUN, 7.62MM, M240	E0998	\$6,898	167	167	167	167	232
MACHINE GUN, .50 CAL, UGWS, M2	E0999	\$9,714	47	47	47	47	103
LASET TARGET DESIGNATOR, AN/PEQ-1B	E1030	\$120,000	35	35	35	35	67
METEOROLOGICAL STATION GROUP	E1035	\$520,000	12	12	12	12	5
MORTAR, 60MM, M224	E1065	\$55,879	81	81	81	81	81
MORTAR, 81MM, M252	E1095	\$121,855	80	80	80	80	80
MUZZLE VELOCITY SYSTEM, M94	E1145	\$25,000	34	34	34	34	24
PADS, AN/USQ-70	E1210	\$299,115	20	20	20	20	15
RECOVERY VEHICLE, HEAVY, M88A2	E1378	\$2,748,846	6	6	6	6	6
SNIPER RIFLE, M40A3	E1460	\$2,850	125	125	125	125	118
SPECIAL APP SCOPED RIFLE (SASR), .50 CAL	E1475	\$7,500	37	37	37	37	41
HIGH MOB ARTILLERY ROCKET SYS (HIMARS)	E1500	\$2,500,000	12	12	12	12	12
RECEIVER, INFRARED (STINGER), AN/PAS-18	E1837	\$24,068	38	38	38	38	19
TANK, COMBAT, 120MM GUN, M1A1	E1888	\$2,393,439	56	56	56	56	48
TEST SET, DSESTS, AN/USM-615	E1906	\$561,312	3	3	3	3	3
TEST SET, MISSILE GUIDANCE, AN/TSM-152	E1911	\$9,540	26	26	26	26	28
FIELD TEST SET, TOW, AN/TSM-140B	E1912	\$197,705	26	26	26	26	28
THERMAL WEAPON SIGHT, AN/PAS-13D(V)3	E1976	\$19,306	107	107	107	107	245

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Table 2

**Average Age of Equipment**

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

<b>Nomenclature</b>	<b>Equip No.</b>	<b>Average Age</b>	<b>Remarks</b>
HELICOPTER, UTILITY, UH-1N	UH-1N	34	
HELICOPTER, CARGO, CH-53E	CH-53E	18	
HELICOPTER, CARGO, CH-46E	CH-46E	38	
HELICOPTER, ATTACK, AH-1W	AH-1W	13	
AIRCRAFT, FIGHTER/ATTACK, F/A-18A	F/A-18A	22	
AIRCRAFT, FIGHTER, F-5F	F-5F	30	
AIRCRAFT, FIGHTER, F-5N	F-5N	29	
AIRCRAFT, REFUELING/CARGO, KC-130T	KC-130T	18	
AIRCRAFT, UTILITY/CARGO, UC-12B	UC-12B	26	
AIRCRAFT, UTILITY/CARGO, UC-35C	UC-35C	9	
AIRCRAFT, UTILITY/CARGO, UC-35D	UC-35D	6	
SEMI-TRAILER, 5,000 GAL REFUELER, M970	D0215	32	Began fielding new MK970; will take 3 years to field new system.
RADIO TERMINAL SET, AN/TRC-170	A2179	15	
CRANE, HIGH SPEED, HIGH MOBILITY, HSHMC	B0443	18	Being replaced by new crane, currently fielding MPS.
LIGHT ARMORED VEHICLE, 25MM, LAV-25	E0947	23	SLEP scheduled to occur between FY 2005-2009.
FRONT POWER UNIT, LOGISTICS VEHICLE SYSTEM, MK48 MOD 0	D0209	22	Being replaced with LVSR (IOC 2009/FOC 2011).
TRUCK, UTILITY, HMMWV, M998	D1158	22	
ASSAULT AMPHIBIOUS VEHICLE, PERSONNEL, AAVP7A1	E0846	23	Being replaced with the AAV (IOC 2010/FOC 2020); Last Service Life Extension Program (SLEP) occurred between 1982-1986. New PIPs being evaluated due to EFV (Formally AAV) slippage for FY 2007-2010.
TANK, COMBAT, 120MM GUN, M1A1	E1888	16	All M1A1 Tanks are being replaced with heavy armor Tanks by March 2008.
HOWITZER, MEDIUM, TOWED 155MM, M198	E0665	25	Being replaced with the Lightweight 155MM Howitzer (LW155) (IOC 2005/FOC 2008).

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Table 3

**Service Procurement Program - Reserve (P-1R)**

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

<b>Nomenclature</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>
<b>ARTILLERY AND OTHER WEAPONS</b>			
HIGH MOBILITY ARTILLERY ROCKET SYSTEM	\$109,460,000	\$172,549,000	\$50,394,000
<b>TOTAL</b>	<b>\$109,460,000</b>	<b>\$172,549,000</b>	<b>\$50,394,000</b>

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Table 4

**National Guard and Reserve Equipment Appropriation (NGREA) Procurements**

*NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.*

Nomenclature	FY 2006	FY 2007	FY 2008
KC-130T AN/ARC-210 SATCOM RADIO		1,715,000	
VIRTUAL COMBAT CONVOY TRAINER	6,533,332	4,900,000	
INTEGRATED INTRA-SQUAD RADIO (IISR)	2,592,500		
ALTERNATE POWER SUPPLY (DIVISION)	1,130,000		
COUNTERINTELLIGENCE HUMINT EQUIPMENT SUITE (CIHEP)	160,000		
MEDIUM TACTICAL VEHICLE REPLACEMENT - TRAINING SYS	398,000	3,950,000	
AN/PRC-148 HANDHELD RADIO	1,042,500		
6TH COMMUNICATION BATTALION PACKAGE	668,000		
MARINE EXPEDITIONARY POWER DISTRIBUTION SYSTEM	1,000,000		
DEFENSE ADVANCED GPS RECEIVER (DAGR)	219,141	280,950	
M4 CARBINE	150,075		
COMBAT VEHICLE TRAINING SIMULATOR	3,980,000		
MARINE LOGISTICS COMMAND COMM PACKAGE	3,702,000		
TACTICAL DATA NETWORK TRAINING SOLUTIONS PACKAGE	3,300,000		
GROUND LASER TARGET DESIGNATOR	2,856,000		
ENVIRONMENTAL CONTROL UNIT	1,104,000		
ALTERNATE POWER SUPPLY (FORCE)	592,000		
IN-TRANSIT VISIBILITY MANAGEMENT PACKAGE	170,000		
COMMUNICATIONS PACKAGE		1,436,050	
INDIRECT FIRE - FORWARD AIR CONTROL TRAINER (I-FACT)		1,875,000	
LOGISTICS SUPPORT WIDE AREA NETWORK (LSWAN) PKG		3,465,000	
DEPLOYABLE VIRTUAL TRAINING ENVIRONMENT (DVTE)		1,170,000	4,995,000
SENSOR MOBILE MONITORING SYSTEMS (2ND GEN)		900,000	
LITENING II TARGETING POD		7,200,000	
F/A-18 LITENING II TARGETING POD MODIFICATION KITS		108,000	
UC-12 AIRCRAFT		8,000,000	9,100,000
PRO RATA SHARE OF REDUCTION UNDER P.L. 109-298, SEC 8106		(141,000)	
KC-130T AN/ARC-210 1556 TO 1794 UPGRADE			1,437,000
MULTI-BAND MAN PACK (ROVER III)			258,000
HMMWV EGRESS ASSISTANCE TRAINER (HEAT)			500,000
MEDIUM TACTICAL VEHICLE REPLACEMENT - OPERATOR DRIVING SIMULATOR (MTVR-ODS)			4,445,000
VIRTUAL COMBAT CONVOY TRAINER - RECONFIGURABLE VEHICLE SIMULATOR (VCCT-RVS)			2,750,000
F/A 18+ LITENING II TARGETING POD			14,700,000
BRITE STAR FORWARD LOOKING INFRA-RED (FLIR)			3,600,000
TACTICAL REMOTE SENSOR SUITE (TRSS)			2,911,000
<b>TOTAL</b>	<b>\$29,597,548</b>	<b>\$34,859,000</b>	<b>\$44,696,000</b>

**Projected Equipment Transfer/Withdrawal Quantities**

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the AC receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty	Remarks

**Service has no planned transfers or withdrawals for the years FY 2009 thru FY 2011**

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Table 6

**FY 2005 Planned vs Actual Procurements and Transfers**

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGRER columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGRER (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b><u>FY 2005 PLANNED TRANSFERS &amp; WITHDRAWALS</u></b>							
<i>USMCR indicated no planned transfers or withdrawals in the FY 2005 NGRER</i>							
<b><u>FY 2005 P-1R EQUIPMENT</u></b>							
<b>WEAPONS &amp; COMBAT VEHICLES</b>							
AAV7A1 PIP				\$6,751,000	\$6,720,000		
MODIFICATION KITS (TRACKED VEHICLES)				673,000	669,000		
HIMARS				16,340,000	15,864,000		
MOD KITS (ARTILLERY)				292,000	291,000		
MARINE ENHANCEMENT PROGRAM				611,000	609,000		
MODULAR WEAPON SYSTEM				2,959,000	2,946,000		
<b>GUIDED MISSILES</b>							
HIMARS ROCKETS				1,325,000	1,279,000		
<b>COMMUNICATIONS &amp; ELECTRONICS EQUIPMENT</b>							
MULTIPLE ROLE RADAR SYSTEM				284,000	283,000		
AUTO TEST EQUIPMENT SYSTEM				1,735,000	1,727,000		
GENERAL PURPOSE ELECTRONIC TEST EQ				1,341,000	1,335,000		
RADAR SET AN/TPS-59				1,020,000	1,015,000		
INTELLIGENCE SUPPORT EQUIPMENT				197,000	196,000		
MOD KITS (INTEL)				260,000	259,000		
GENERAL PURPOSE MECHANICAL TMDE				768,000			
NIGHT VISION EQUIPMENT				5,782,000	5,756,000		
RADIO SYSTEMS				2,367,000	2,356,000		
COMM SWITCHING & CONTROL SYSTEMS				176,000	175,000		
AIR OPERATIONS C2 SYSTEMS				534,000	532,000		
FIRE SUPPORT SYSTEM				459,000	457,000		
<b>SUPPORT VEHICLES</b>							
ITEMS LESS THAN \$5 MILLION				192,000	191,000		
<b>ENGINEER &amp; OTHER EQUIPMENT</b>							
ENVIRONMENTAL CONTROL EQUIPMENT				261,000	260,000		
BULK LIQUID EQUIPMENT				159,000	158,000		
TACTICAL FUEL SYSTEMS				753,000	749,000		
POWER EQUIPMENT ASSORTED				1,733,000	1,725,000		
AMPHIBIOUS RAID EQUIPMENT				133,000	132,000		

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Table 6

FY 2005 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
MATERIAL HANDLING EQUIP				2,754,000	2,741,000		
FIELD MEDICAL EQUIPMENT				469,000	467,000		
TRAINING DEVICES				3,586,000	3,569,000		
CONTAINER FAMILY				626,000	624,000		
FAMILY OF CONSTRUCTION EQUIPMENT				940,000	935,000		
MODIFICATION KITS				128,000	128,000		
<b><u>FY 2005 NGREA EQUIPMENT</u></b>							
CH-46 HELICOPTER LIGHT WEIGHT SEATS						\$650,000	\$2,028,000
CH-53E HELICOPTER NIGHT VISION SYSTEM B KITS						2,200,000	2,200,000
EMBARKATION MOBILIZATION BOXES						550,000	550,000
EMBARKATION ENABLERS						447,720	447,720
PALLETIZED CONTAINERS (PALCON)						254,320	254,320
AN/PRC-148 HANDHELD RADIO						320,000	320,000
AN/PRC-150C HF RADIO						1,152,000	1,512,450
AN/PRC-150C HF RADIO REMOTE KITS						320,000	320,000
AN/VRC-103 RADIO VEHICLE MOUNTS						400,000	400,000
AN/PVS-17B MINIATURE NIGHT SIGHT						270,360	270,360
AN/PVS-17C MINIATURE NIGHT SIGHT						282,660	282,660
KC-130T ARC-210 SATCOM RADIO						140,000	144,814
AH-1W AIRCRAFT SURVIVABILITY EQUIP						1,280,000	3,200,000
AN/PRC-117 SATCOM RADIO						3,927,000	4,544,100
AN/PAS-13 THERMAL WEAPON SIGHT						1,700,000	1,700,000
DIGITAL COMBAT OPERATIONS CENTER POWER SUPPORT						1,800,000	1,800,000
MARINE LOGISTICS OPERATIONS CENTER POWER SUPPORT						600,000	600,000
ALTERNATE POWER SUPPLY (DIVISION)						0	523,000
M4 INMARSAT TERMINAL						0	37,464
EPLRS SUPPORT PACKAGE						237,671	237,671
DATA COMMUNICATIONS NETWORK TOOLBOX						84,000	84,000
COMPUTER DATA TRANSFER, AN/CYZ-10						4,814	
MCRISP						2,157,506	2,157,506
XTS-5000 DIGITAL PORTABLE RADIO EQUIPMENT						1,080,000	1,680,000
COUNTERINTELLIGENCE HUMINT EQUIPMENT SUITE (CIHEP)						253,944	507,945
MARINE LOGISTICS COMMAND SUPPORT PACKAGE						1,752,995	1,752,995
INTEGRATED INTRA-SQUAD RADIO (IISR)						259,301	993,166
GLTD II TARGET LASER DESIGNATOR II, AN/PEQ-1B						2,281,136	4,306,200
TA-31F ADVANCED COMBAT OPTICAL GUNSIGHT (ACOG)						1,140,000	881,250
MARINE EXPEDITIONARY POWER DISTRIBUTION SYSTEM						200,000	200,000
DEFENSE ADVANCED GPS RECEIVER						129,600	177,600
VIIGP LONG RANGE THERMAL IMAGER, SOPHIE						833,500	1,218,050
AN/GRC-239 TROPO SATELLITE SUPPORT RADIO (TSSR)						1,116,000	1,400,000
VIPER LCH-41						19,434	0

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Table 6

**FY 2005 Planned vs Actual Procurements and Transfers**

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
VECTOR 21 (VIPER LCH-41 REPLACEMENT)						0	717,453
STOMP II MEDICAL KIT PACK						437,444	529,344
LINK 16 MANAGEMENT SYSTEM (LMS-16)						762,695	762,695
6TH COMMUNICATION BATTALION PACKAGE						206,140	206,140
INDOOR SIMULATED MARKSMANSHIP TRAINER - ENHANCED						2,600,000	2,600,000
LSA ADAPTOR						1,053,978	1,053,978
DEHUMIDIFICATION SYSTEM						64,730	64,730
INTELLIGENCE OPERATIONS SYSTEM V2						218,400	218,400
VIRTUAL COMBAT CONVOY TRAINER						5,300,000	5,300,000
AIR RESCUE FIRE FIGHTING (ARFF) EQUIP						725,712	725,712
MTVR - TRAINING SIMULATOR						350,000	350,000
PROMINA 400/800						282,940	282,940
M4 CARBINE						0	15,262
AN/PVS-7D NIGHT VISION DEVICE						0	166,650
AN/PVS-14 NIGHT VISION DEVICE						0	90,425
<b>TOTAL</b>				<b>\$55,608,000</b>	<b>\$54,148,000</b>	<b>\$39,846,000</b>	<b>\$49,815,000</b>

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Table 7

**Major Item of Equipment Substitution List**

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No

**Service Does Not Use Substitution To Satisfy  
Major Item Equipment Requirements**

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Table 8

**Significant Major Item Shortages**

*NOTE: This table provides a RC top ten prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

<b>PR</b>	<b>Nomenclature</b>	<b>Total Req'd</b>	<b># Items Short</b>	<b>Item Cost</b>	<b>Total Shortage Cost</b>	<b>Rationale/Justification</b>
1	KC-130T AN/ARC-210 Radio	28	6	\$239,500	\$1,437,000	OIF / GWOT
2	Integrated Intra-squad Radio (IISR)	3,243	636	\$3,000	\$1,908,000	OIF / GWOT
3	Defense Advanced GPS Receiver (DAGR)	1,438	631	\$2,000	\$1,262,000	OIF / GWOT
4	Medium Tactical Replacement Vehicle - Operator Driving Simulator (MTVR ODS)	15	3	\$618,000	\$1,854,000	OIF / GWOT
5	Deployable Virtual Training Environment (DVTE)	185	153	\$37,000	\$5,661,000	OIF / GWOT
6	F/A-18+ Litening II Targeting Pod	10	7	\$2,100,000	\$14,700,000	OIF / GWOT
7	Tactical Remote Sensor System (TRSS)	3	1	\$2,882,000	\$2,882,000	OIF / GWOT
8	Raytheon King Air 350C (UC-12+)	2	1	\$9,100,000	\$9,100,000	OIF / GWOT
9	Multi-band Man-pack ROVER III (Remote Operations Video Enhanced Receiver)	6	6	\$43,000	\$258,000	OIF / GWOT
10	Bright Star FLIR	9	9	\$1,200,000	\$10,800,000	OIF / GWOT

## **Chapter 4**

### **United States Navy Reserve**

#### **I. Navy Overview**

##### **A. Navy Planning Guidance**

The Chief of Naval Operations (CNO) Guidance for 2007–2008, “Executing our Maritime Strategy,” dated 25 October 2007, states that the U.S. Navy will remain the preeminent maritime power, providing our country a global naval expeditionary force committed to global security and prosperity. We defend our homeland and our Nation’s vital interests around the world. We will prevent war, dominate any threat, and decisively defeat any adversary. The Navy will remain a powerful component of joint warfare by exploiting cutting edge technology and cooperating closely with the other Services, the interagency community, allies, and international partners. We will remain a superbly trained and led team of diverse sailors and civilians, who are grounded in our warrior ethos, core values, and commitment to mission readiness and accomplishment.

Additionally, we will be both effective and efficient in building, sustaining and employing the force, informed by rigorous measures and a clear understanding of the return on investment. We will determine the right types and levels of output required of our Navy, and align our resources and processes to deliver that output at the best cost. Our success in defending our Nation requires balance across the capabilities, capacity, readiness and people that combine to make the Navy a relevant force. We will maintain a long view with regard to balancing these priorities and respecting the imperatives of today while building a foundation for tomorrow.

The Secretary of the Navy stated in his March 2007 testimony to Congress that the Department must invest in new generation capabilities to transform the force. The Navy must leverage the procurement process to build a force that is affordable and meets national security challenges.

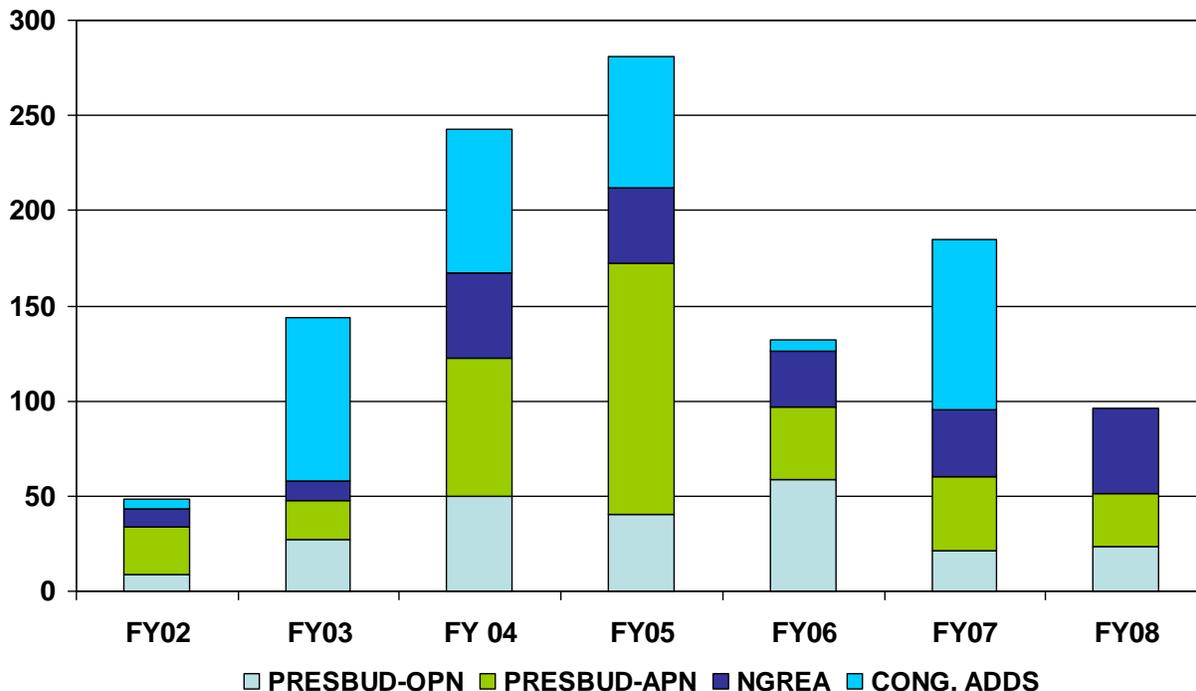
##### **B. Navy Equipping Policy**

Navy policy (OPNAV Instruction 4423.3) states that units will be equipped to accomplish all assigned missions and will have an equipment and distribution program that is balanced, responsive to mission requirements and sustainable. The priority for distribution of new and combat serviceable equipment and associated support and test equipment is to units scheduled to deploy first. The same methodology for prioritizing equipment distribution for Active component (AC) units determines equipment priorities for Reserve component (RC) units with the same mobilization mission or deployment requirements.

The Navy will establish and maintain a seamless and fully integrated Total Force. The RC will be a force multiplier to the Total Force that can be used periodically and predictably, providing operational support when and where needed most at a cost savings to the Navy. Each Navy Warfare Enterprise (Air, Surface, Subsurface, Expeditionary, and Networks) identifies RC requirements for new equipment as part of the Navy’s resource allocation process. The Department of the Navy funds RC equipment through the President’s Budget (PRESBUD) request, Congressionally added funding, and National Guard and Reserve Equipment

Appropriation (NGREA) funding. Figure 4-1 provides an overview of funding provided to Navy RC from all three sources for FY 2002 through FY 2008.

*Figure 4-1. Navy RC Procurement Funding Sources (in million dollars)*



### C. Plan to Fill Mobilization Shortages in the RC

Major Operation Plans (OPLANs) and Contingency Plans require RC units to deploy as integrated parts of the Navy warfighting plan. Navy Component Commanders (NCCs) identify equipment requirements during the resource allocation process, which the CNO then prioritizes.

RC activities maintain equipment as either training or mobilization assets. It is stored at major embarkation locations in the United States as War Reserve Materiel Stock (WRMS), pre-positioned overseas/afloat, or deferred from procurement. WRMS equipment is released, shipped, and used by both AC and RC according to operational requirements.

### D. Initiatives Affecting RC Equipment

The Navy has several ongoing initiatives to modernize, improve, or change the operational capabilities of the RC. These initiatives include:

- Modernization and replenishment of the Maritime Expeditionary Security Force (MESF), formerly known as Naval Coastal Warfare; Explosive Ordnance Disposal (EOD); Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) equipment; boats; and Civil Engineering Support Equipment (CESE).

- Development and execution of the Naval Construction Force (NCF) plan to modernize and recapitalize Table of Allowance (TOA) equipment, including tactical vehicles, construction/maintenance equipment, and expeditionary camp material. Lessons learned from Operation DESERT STORM identified serious problems with over-reliance on commercial vice tactical vehicles, wide diversities in type/model of truck chassis, and excessive aging due to inadequate procurement budgets. An accredited budget model for NCF, with average equipment age included as a cost-versus-readiness variable, has identified minimum budget levels to sustain a ready force. In 2007, \$27M is allocated for equipment procurement for NCF, sufficient to maintain a 20-year average equipment age, within current CNO-approved, acceptable levels of risk required to maintain readiness. Lessons learned from Operations ENDURING FREEDOM (OEF) and IRAQI FREEDOM (OIF) identified a nine-year average age as optimal for NCF equipment. The CNO has supported the recapitalization and modernization of NCF equipment through inflation-adjusted program funding across the FYDP, as well as supplemental funding. NGREA funds will reinforce the NCF equipment program for the procurement of High Mobility Multipurpose Wheeled Vehicles (HMMWV), tactical trucks (Medium Tactical Vehicle Replacement [MTVRs]), Combat Hardening, and Scalable Skid Loaders. This is critical to filling equipment gaps and replacing substandard commercial equipment with adequate tactical gear, thereby accelerating the outfitting of RC units. This equipment is used to train RC Seabees at Readiness Support Sites and protect Seabees in operational environments.
- Modernization and replacement of the Naval Expeditionary Logistics Support Group (NAVELSG) equipment TOA is necessary to improve current readiness and to ensure successful and safe cargo handling operations. NAVELSG equipment (CESE, material handling equipment [MHE], and communications gear) held by units and in WRMS is serviceable, but requires modernization. Since FY 2004, more than \$8 million in NGREA funding has been provided to NAVELSG to upgrade their TOA and purchase Crane Training Systems (simulators) and Small Arms Simulators (M9 and M16). The TOA equipment is being centralized to help preserve the equipment and ensure availability for short notice mobilization.
- Creation of the Maritime Civil Affairs Group (MCAG) and its associated Maritime Civil Affairs Squadrons (MCAS ONE and MCAS TWO) is one of the CNO's GWOT initiatives. This necessitates the training and equipping of 15 Reserve Maritime Civil Affairs Teams (MCATs), which will require purchase of TOA that includes weapons, communications equipment, facilities, and vehicles. Currently, the Navy Expeditionary Combat Command (NECC) has provided funding to support four MCAT TOA purchases.



*LT Lerdahl preparing for deployment at Fort Jackson, South Carolina*

- Replacement of the aging DC-9 and C-9B aircraft with the C-40A is a critical RC capability enhancement. A Director of Air Warfare letter dated March 20, 1997, initiated the C-9 aircraft replacement program. The program's goal is to replace the original 27 aging DC-9 and C-9B transport aircraft with C-40A aircraft at a rate of three per year. To date, 13 C-40A aircraft have been procured or are programmed through a combination of NGREA, Congressional Adds, and the Navy's FY 2008 PRESBUD as displayed in Table 4-1.

*Table 4-1. RC C-40A Funding*

FY	Quantity	Funding Source
1997	2	NGREA
1998	1	NGREA
1999	1	NGREA
2000	1	PRESBUD
2001	1	CONG ADD
2002	0	PRESBUD
2003	1	CONG ADD
2004	1	PRESBUD
2005	1	PRESBUD
2006	0	PRESBUD
2007	0	PRESBUD
2008	0	Navy's submit
2009	1	Navy's submit
2010	0	Navy's submit
2011	1	Navy's submit
2012	1	Navy's submit
2013	1	Navy's submit

- Upgrade of six SH-60 aircraft with mission essential communication and navigation equipment required for counter narcotics operations and interoperability with Joint Inter-Agency Task Force agencies in the Southern Command (SOUTHCOM) Area of Responsibility (AOR). The RC currently operates six SH-60Bs, of which two are equipped with a Very High Frequency (VHF) capable radio. The remaining four aircraft will receive the VHF radio as part of a Block I upgrade, which also incorporates Penguin missile and torpedo launch capabilities procured with 2004 NGREA funding.
- Revision of the Navy's Helicopter Concept of Operations plan. The long-term goal is to replace all Navy helicopters with MH-60S and MH-60R type/model/series aircraft. To recapitalize the RC helicopter program will require procurement of 16 MH-60S and eight MH-60R aircraft. To date, eight MH-60S aircraft have RC funding.
- Upgrade of 19 Navy C-130T and 28 Marine Corps KC-130T transport aircraft with improved avionics to make them compliant with Federal Aviation Authority and

International Civil Aviation Office Communication, Navigation, and Surveillance (CNS) requirements in support of Global Air Traffic Management. The first modification of aircraft is expected in FY 2009.

- Upgrade of 32 F-5N aircraft with an improved Inertial Navigation System (INS) and instrumentation to enhance readiness and sortie completion rates, reduce risk in all weather operations, and enhance the reliability and supportability of the navigation system. The INS upgrade is currently completely funded.
- Replacement of 32 Navy and 12 Marine Corps F-5 aircraft with Swiss F-5 aircraft. To date, 32 aircraft have been funded by the PRESBUD requests and 12 have been funded with NGREA. Forty-two aircraft will have been received by the end of 2007 with the remainder being received by the end of 2008. This program is completely funded.
- Replacement of the VP-3 aircraft. A Director of Air Warfare letter dated April 26, 2000, initiated replacement of VP-3 aircraft with C-37s. Four aircraft have been delivered, the first in FY 2002. Congress added funding for two C-37 aircraft, one in FY 2004 and one in FY 2005, and 2005 PRESBUD funded the fourth aircraft.

#### **E. Plan to Achieve Full Compatibility between AC and RC**

The Navy will continue to manage Total Force equipment inventories to provide the most capable systems to meet mission requirements and minimize the effects of equipment shortfalls and incompatibility. The Navy stresses interoperability as part of the Total Force concept and makes no distinction between the AC and RC. Equipment acquisition, upgrade programs, and equipment redistribution from the AC have reduced problems in RC equipment capability and compatibility with AC and joint forces.

The Navy Warfare Enterprises are establishing requirements and funding for RC readiness and training, consolidating AC and RC equipment where feasible, simplifying the funding processes, and validating RC requirements in accordance with CNO Strategic Guidance.

All expeditionary forces were placed under NECC in January 2006. This new Warfare Enterprise includes MESF, EOD units, NCF, MCAG, and NAVELSG. NECC in turn falls under the command of U.S. Fleet Forces Command (USFF). NECC determines the priority and funding levels for AC and RC equipment based on Component Commander requirements.

## II. Navy Reserve Overview

### A. Current Status of the Navy Reserve

#### 1. General Overview

The Navy is a seamless and fully integrated Total Force. Navy Reserve units are equipped to accomplish all assigned missions and will have an equipment and distribution program that is balanced, responsive to mission requirements, and sustainable. The AC determines equipment requirements ensuring RC equipment compatibility.

The Navy Reserve consists of hardware units and augmentation units. Equipment availability affects unit training, readiness, and the ability to perform assigned missions. Systems Commands (i.e., Naval Supply

Systems Command, Naval Facilities Engineering Command, Naval Air Systems Command, and Naval Sea Systems Command) act as project managers to establish equipment allowances for designated RC hardware units to support operational requirements.

Navy Reserve hardware units currently consist of 17 NCF, 14 NAVELSG, four MESF Squadrons, 22 MESF Divisions, 48 MESF Detachments, 15 MCAT, four EOD Operational Support Units, nine Expeditionary Support Detachments, 13 ships and 169 aircraft. All RC ships, MESF, NCF, NAVELSG and EOD units are under the operational control of USFF or Pacific Fleet. RC aircraft squadrons are under the operational control of Commander, Naval Air Forces. The RC possesses 100 percent of the Navy's organic medium airlift, 75 percent of the adversary training capability, 20 percent of the maritime patrol squadron capability, 13 percent of the airborne early warning capability, 12 percent of the rotary wing capability, and nine percent of the carrier air wing capability.

#### a. Maritime Expeditionary Security Force

The MESF Organizations consist of two echelon-four group commands (AC commander with RC augmentation), 10 echelon-five squadron commands (one AC, five AC-commanded with both AC and RC subordinate commands, and four RC), 32 echelon-six division commands (10 AC and 22 RC), and 69 Detachments (21 AC and 48 RC). The echelon-six division commands are specialized in one of three functional areas: boats, security, or command and control (C<sup>2</sup>). Likewise, the subordinate detachments are similarly specialized into boat detachments, security detachments, and communications or sensor detachments. The mission of MESF is to conduct security operations to defeat Level I and II threats in the near coast, inshore, and harbor/port environments. Specifically, the MESF will:

- Conduct high-end force protection and security for designated assets
- Provide layered defense in an integrated coastal and landward security environment

#### Top USNR Equipping Challenges

- C-40 procurement
- Civil engineering, material handling, and communications equipment for GWOT related units
- Aircraft upgrades (C-130 and C-9)

- Provide maritime expeditionary C<sup>2</sup> integration within NCC, Joint Force Maritime Component Commander (JFMCC), Commander Joint Task Force, and Coalition operations when directed
- Provide the NCC with adaptive force packages responsive to Combatant Commander Disaster Response force requirements
- Provide integrated maritime expeditionary security capabilities, including:
  - Mobile and fixed defensive operations
  - Visit, Board, Search, and Seizure (VBSS) Level III
  - Robust security in support of NCC operations across the spectrum of engagement from MCO Phase 0 through Phase V
- Support NCC Theater Security Cooperation (TSC) operations including:
  - Providing training capability for partnering with other nations
  - Support for Host Nation Security, Stabilization and Reconstruction Operations (SSTRO).

AC and RC MESF units are hardware equipped for their additional mission as Crisis Response-Immediate (CR-I) units. They are assigned operationally to the cognizant numbered fleet

commander, but as CR-I units they are available for Homeland Security tasking as required. All MESF units require individual combat equipment and weapons for all assigned personnel, and sufficient CESE for the overland tactical movement of their assigned TOA and personnel. The boat divisions currently operate the 25' and 34' inshore patrol craft, which are equipped with crew-served weapons and an Mk 19 grenade launcher. The security divisions, which perform landward, mobile over road, and embarked vessel security, are likewise equipped with various crew-served weapons. The Communications Detachments are equipped with the Mobile Ashore Support Terminal, and the Sensor Detachments are equipped with the AN/TSQ-108A(V4) Mod 2, Radar Sonar Surveillance Center.



*Riverine TWO, Exercise Comet*

## **b. Naval Construction**

The Navy Reserve provides 66 percent of the Navy's combat construction capability in support of Unified and Navy Component Commander requirements. The AC and RC are a fully integrated force, with all units having the same operational chain of command, mission, readiness standards, and equipment. OPLAN support is provided by a mix of AC and RC units with ready equipment sets in theater.

Under the operational control of First Naval Construction Division (1NCD), the RC NCF consists of four Naval Construction Regiments (NCR); 12 Naval Mobile Construction Battalions; one Naval Construction Force Support Unit (NCFSU); and augment forces attached to 1NCD, three AC NCRs, and two Construction Battalion Maintenance Units (CBMUs).

To improve the balance between early and late flowing units to support existing OPLANs, two RC CBMUs were converted to AC in 2006. This allows rapid deployment to support Marine Corps headquarter base camps, eliminating 17 smaller, specialized AC

Construction Battalion Units, and, support Navy Expeditionary Medical Units (formerly Fleet Hospitals). This provides greater capability to respond to chemical, biological, nuclear, radiological, and explosive incidents within the United States.



*BU2 Winters, NMCB 28, Rawa, Iraq*

Immediately following the September 11<sup>th</sup> attack, more than 700 personnel from RC NCF units mobilized and deployed to Camp Rhino and Kandahar Airport in Afghanistan, and to other locations throughout the world to perform construction and force protection projects. Throughout OIF and OEF, nearly 5,900 RC Seabees have deployed, some twice, from 17 different units for direct operations in the Central Command (CENTCOM) AOR. Follow on OIF/OEF presence has been provided by six-month rotations with over 600 RC personnel per rotation. Furthermore, approximately 600 RC personnel support current operations in Iraq and Afghanistan on six-month rotations to provide base camp support to USMC and coalition security forces and a robust construction capability to repair Iraqi infrastructure and support for Special Operations Forces. This represents one-third of the NCF presence in the CENTCOM AOR, and current planning assumptions indicate a requirement to mobilize every RC NCF unit to fill rotational support operations through the end of FY 2007. RC NCF assets are critical to ensuring Navy mission support in the most dangerous sector of the Iraqi theater as well as worldwide forward presence.

The RC NCF has equipment shortfalls in their deployment TOA pack-ups held in WRMS. Equipment shortfalls include tactical vehicles, CESE, and communications gear. Funds provided from FY 2004–2007 NGREA to procure two mobile firearms training simulators, HMMWVs, and MTRVs have increased RC readiness. These investments have enhanced RC NCF's

exceptional ability to rapidly mobilize, quickly refresh their military skills during the post-mobilization training phase, and then deploy into a hostile theater at the same readiness levels as their AC counterparts.

### **c. Maritime Civil Affairs Group**

The MCAG and its associated squadrons with their teams were established as part of the CNO's GWOT initiative to assess, plan, and execute Civil Affairs (CA) operations in the maritime environment (including littorals and rivers) using an effects-based planning methodology. These operations support the NCC in engaging the civil component to enhance the effectiveness of planned or ongoing operations. These operations will also assist in integrating the NCC or JFMCC actions into the Combatant Commander's overarching CA program.

The MCAG, located at Naval Amphibious Base Little Creek, VA, oversees the manning, training, and equipping of its two regionally aligned MCAS. MCAS ONE, located on the West Coast at Imperial Beach, CA, is designated to support Pacific Command (PACOM) and CENTCOM. MCAS TWO, located on the East Coast at Yorktown, VA, is designated to support SOUTHCOM, European Command (EUCOM), and the emerging Africa Command. Both squadrons will be able to deploy up to 17 AC and 15 RC MCATS. With the RC providing approximately one-half of the available MCATs, interoperability with their AC counterparts is vitally important.

Both AC and RC teams provide the ability to assess the operational space to include infrastructure, populations, and health concerns. This information is then fed to the supported commander in order to develop the civil component of the Command Operation Procedure and is used in the development of Continuing Operations Agreements for CA.

In addition to assessments, various RC personnel may be involved in providing CA and Civil-Military Operation expertise to the staff mission analysis/planning process, establishing and manning Civil-Military Operations Centers, and providing maritime functional area reach-back expertise.

The MCAG RC, eventually expected to number 15 teams, is currently funded for the purchase of only four TOAs. As this constitutes only approximately one-fourth of the expected teams, a serious shortfall exists in the actual RC readiness capability. To eliminate this shortfall, the RC must be funded for complete TOA purchase.

### **d. Naval Expeditionary Logistics Support Group**

NAVELSG RC units constitute more than 90 percent of the Navy's cargo handling support capabilities. NAVELSG units provide a wide range of logistics capabilities, including ship loading and discharge, operating air cargo and freight forwarding terminals, warehouse operations, and mobile mail centers. Cargo handlers maintain their skills during peacetime by carrying out ship offloads and backloads for the Naval Expeditionary Medical Support Command, the Maritime Prepositioning Ships, and by providing operational support to Naval logistics commanders in EUCOM, PACOM and CENTCOM AORs. They have been fully integrated with AC since the beginning of FY 2005 when the Navy's AC cargo handling battalion transferred operational and administrative control to NAVELSG.

Immediately following the September 11th attack, more than 60 personnel from NAVELSG units were mobilized and deployed to Bahrain in direct support of OEF. These personnel augmented Commander, Task Force 53 and performed cargo handling and air terminal operations in support of afloat and ashore operating units in the Arabian Gulf region on a continuous basis until July 2003. In support of OEF and OIF, NAVELSG provided 385 personnel for Forward Logistics Site support to offload Maritime pre-positioned and contracted ships in the EUCOM, CENTCOM, and PACOM AORs. NAVELSG's most recent operational commitment has been its involvement in joint operations with the Army and Marine Corps in support of the GWOT. NAVELSG has deployed all of its 3,500 AC/RC force to the CENTCOM AOR in direct support of OIF and has already started the re-deployment of its forces in FY 2008.



*MC3 Martha Stokes, Customs mission in Kuwait*

Additionally, NAVELSG provides mobilization, training, equipping, and administrative support to provisional Customs Inspection Battalions (445 RC personnel per unit). As of the end of FY 2007, NAVELSG has trained over 2,500 RC sailors as Customs Agents. Six Customs Battalions have been deployed to OIF. This mission is scheduled to continue into OIF deployment cycles 7-9.

NAVELSG equipment (CESE, MHE, and communications gear) in units and WRMS is serviceable, but requires modernization. For example, HMMWVs have been added to the NAVELSG TOA; however, NAVELSG must borrow Army and Marine Corps HMMWVs, because it lacks sufficient inventory assets. Since FY 2004, \$8M in NGREA funding has been provided to NAVELSG to upgrade their TOA and purchase Crane Training Systems (simulators) and Small Arms Simulators (M9 and M16). However, less than 20 percent of the NAVELSG TOA requirement is funded, and increased Other Procurement Navy funding will be required to make a significant improvement to TOA shortfalls. Current NAVELSG missions in the CENTCOM AOR are being conducted with Army "stay behind" equipment, thus degrading the readiness of Army transportation units that have redeployed. Additionally, the NAVELSG TOA shortfalls affect the readiness and ability to support OPLANS that require the majority of the force to deploy and conduct simultaneous cargo handling missions.

#### **e. Explosive Ordnance Disposal**

The Navy Reserve EOD Force consists of two Explosive Ordnance Disposal Operational Support Units (EODOSU) located in the fleet concentration areas of San Diego (EODOSU SEVEN) and Norfolk (EODOSU TEN).

RC EODOSU report operationally and administratively to their respective EOD Group Commanders. They are fully integrated with their AC counterparts. EODOSU provide direct,

periodic, and predictable operational support through the utilization of RC EOD Officers and Technicians, RC Navy Divers, and a host of critical support ratings. Each Operational Support Unit (OSU) has a staffing structure of approximately 25 Active, Full Time Support, and Reserve officers, and 130 Active and Reserve enlisted sailors.

OSUs provide all Reserve administrative support to the EOD Force, and each unit consists of operational, deployable RC detachments and a single Reserve C<sup>2</sup> augment unit for each EOD Group. The detachment structure for each unit is as follows: seven Ordnance Clearance Detachments (OCD), two Mobile Communications Detachments (MCD), and one Area Search Detachment (ASD). In addition, EODOSU SEVEN maintains one MK Six Marine Mammal Support Detachment, and EODOSU TEN maintains one Combat Service Support Detachment (CSSD).

OCDs provide diving and demolition support and serve as force multipliers for the AC EOD Force through either mobilization of the entire detachment or individual augmentation. OCD personnel are a mix of EOD Technicians, Navy Divers and Ordnance Clearance divers. OCDs provide operational support in offensive mine scoring/recover (practice mining), retrograde ordnance/explosives disposal, and range clearance operations.

MCDs provide an independently deployable field communications center for integrated command-post tactical and long-haul communications in support of EOD forces in the field. In addition, MCDs provide all necessary communication systems for an EOD Commander Task Force/Task Group in support of maritime operations or as the core of a Joint EOD Task Force. Capabilities include secure radio/telephone, satellite communications, photo digital imagery, secure communications, and cellular communications.

The ASD is a deployable team which operates side-scan sonar, remotely operated vehicles, and precise navigation equipment to detect and/or reacquire underwater objects and non-influence ordnance proud of the bottom.

The CSSD provides berthing and coordinates logistical support and contracting services where available.

The MK Six Marine Mammal Support (MMS) detachment consists of individuals trained and ready to augment the AC Marine Mammal systems. The RC does not maintain any mammals but, when called upon, can seamlessly integrate with their AC counterparts.

The current plan for RC EOD is the transformation of seven EOD OCDs to four EOD companies with two EOD platoons each (eight total per OSU). The plan in motion is to make each OSU, SEVEN and TEN, consist of four EOD companies, matching the AC Mobile Units, with three additional support platoons (ASD, MCD, CSSD for OSU TEN; and ASD, MCD, MK6 MMS for OSU SEVEN). To achieve the transformation, an EOD school pipeline for the RC has been established to create a RC EOD force with the full EOD mission capability rather than just Anti-Terrorism Force Protection and AC EOD support.

## **f. Fleet Air Logistics**

The RC provides all of the Navy's organic intra-theater medium airlift capability, direct logistics support for Fleet Commanders worldwide, and airlift support to all military departments within the continental United States. The Fleet Logistics Support Wing consists of 15 squadrons operating C-40, C-9, C-20, C-37, and C-130 aircraft. The C-9 aircraft average over 31 years in age. They require substantial avionics upgrades and engine replacement to meet globally

mandated noise abatement and navigation requirements. Significant airlift recapitalization was initiated in FY 1997 when \$120M NGREA funding was provided for procurement of two C-40A aircraft to begin the replacement of the aging C-9 fleet. Seven more C-40As were procured between FY 1998 and FY 2005 utilizing NGREA funding, Congressional additions or the PRESBUD. To date, nine C-40As have been accepted and are being operated by VR-59 at Naval Air Station (NAS) Joint Reserve Base, Fort Worth, TX; VR-58 at NAS Jacksonville, FL; and VR-57 at NAS North Island, CA. In FY 2008, the C-130T will be tested with the new Avionics Modernization Program, making the aircraft fully CNS/Air Traffic Management compliant. The remainder of the aircraft will be outfitted by incorporating kits through FY 2012.



*VR-53 conducting medical evacuation flight from Iraq to Kuwait*

## **g. Maritime Patrol Reconnaissance Aviation (MPRA)**

The RC currently provides 20 percent of the Navy's Maritime Patrol Squadrons, primarily providing anti-submarine warfare, counter narcotics operations, and exercises support. The RC has three P-3 squadrons, each with an allowance of six aircraft. The three squadrons report to Commander, Naval Air Forces Reserve via the AC Commander Patrol and Reconnaissance Group and their cognizant numbered AC Patrol and Reconnaissance Wings. The RC squadrons support the Fleet Response Plan (FRP) with a continuous four aircrew worldwide surge capability, train to the same standard as AC aircrews, and operate the Fleet's frontline mission aircraft. VP-92, NAS Brunswick, ME, will disestablish in FY 2008. Its six aircraft have been transferred to the AC. RC combat aircrews will continue to train to and execute frontline missions and enhance the MPRA community's ability to satisfy FRP requirements. Commander, Patrol Wing Reserve disestablished in FY 2007, and the AC wings assumed operational control of the RC Maritime Patrol Squadrons.

## **h. Carrier and Expeditionary Strike Group Rotary Aviation**

The RC provided five helicopter squadrons to the Navy's rotary wing fleet at the beginning of FY 2007. The consolidation of HCS-5 and HC-5 into HSC-85, disestablishment of HS-75, and renaming HCS-84 to HSC-84 resulted in three squadrons being integrated into the AC wings in FY 2007. In addition, the RC provides personnel and equipment (eight MH-53E helicopters) in support of two composite AC and RC Airborne Mine Countermeasures (AMCM) squadrons, HM-14 and HM-15. This represents 12 percent of the Navy's total helicopter inventory, 100 percent of the Navy's Helicopter Combat Support Special Squadrons, and 37 percent of the AMCM assets. The squadrons perform a variety of critical missions including search and rescue, logistics support, anti-submarine warfare, AMCM and counter narcotics operations. The RC helicopter inventory consists of the HH-60H, SH-60B, MH-53E and MH-60S aircraft. During OIF, HCS-4, NAS Norfolk, VA, and HCS-5, NAS San Diego, CA, were partially mobilized and deployed to Kuwait and Iraq, supporting special operations ground force missions in urban and rural areas, supporting psychological operations, and helping with medical and casualty evacuations. The RC helicopter footprint in Iraq has been continuous since 2003 with detachments from HCS-4 and HCS-5, now HSC-84 and HSC-85, on one year rotations. The RC squadrons are also significantly involved with Counter-Narcotics operations. HSL-60 at NAS Mayport, FL, deploys for 6-months/year with Joint Inter-Agency Task Force agencies in the SOUTHCOM AOR.



*HSC-85 MH-60S Aircraft Fighting California Wildfires*

## **i. Tactical Aviation**

RC Tactical Support Wing (TSW) provides a strategic reserve for the Navy's 11 Carrier Air



*TSW Aircraft in El Centro*

Wings. TSW is comprised of six squadrons: two F/A-18A+/C, one EA-6B, one E-2C and two F-5E/F/N. VAQ-209 completed a 75-day deployment to Al Asad, Iraq in FY 2006, flying over 1600 combat hours in the EA-6B. The EA-6B is to be removed from the Navy's inventory in 2012, and VAQ-209 does not have a replacement aircraft identified. TSW squadrons also provide operational support in the form of adversary training, counter narcotics, and homeland defense operations. The TSW provides 75 percent of the Navy's adversary mission

capability. Carrier Airborne Early Warning Squadron (VAW)-77 provides 180 days (100 percent) of the Joint Chiefs of Staff requirement for Navy VAW counter narcotics support to SOUTHCOM, and 30 days of homeland defense support to Northern Command, while participating regularly in TSW and AC exercises.

#### **j. Surface/Mine Warfare**

The RC surface capability consists of nine OLIVER HAZARD PERRY class frigates (FFG), four Mine Hunter Coastal (MHC), and four Mine Countermeasure (MCM) ships. The four MHC ships are scheduled to decommission in FY 2008, and three MCM ships will transition to the AC in FY 2008. All mine countermeasure ships are homeported in Ingleside, TX.



*USS CURTS (FFG 38)*

RC ships regularly deploy to support the Navy's operational requirements, participating in numerous fleet operations and exercises such as Standing Naval Forces Atlantic, Partnership of the Americas, UNITAS, RIMPAC, CARAT, KERNAL BLITZ, COBRA GOLD, and counter-narcotics operations in the Caribbean and the Pacific. FFGs were deployed in support of OEF and NOBLE EAGLE. These ships are significant fleet assets as well as important training platforms for Navy Reservists.

## **2. Status of Equipment**

### **a. Equipment On-hand**

*Table 1* provides RC major equipment inventories on-hand and requirements to meet assigned missions.

### **b. Average Age of Major Items of Equipment**

The RC possesses equipment requiring replacement and modernization. *Table 2* provides the average age of major equipment. Of particular concern are the C-9Bs (31 years old) and EA-6Bs (21 years old). Additionally, significant amounts of the MESF, NCF, NAVELSG, and EOD TOA equipment, CESE and MHE are over-aged.

### **c. Compatibility of Current Equipment with the AC**

Achieving RC equipment compatibility with the AC is one of the Navy's priorities. Navy procurement and upgrade programs as well as Congressional Adds have improved RC equipment capability and compatibility.

For the NCF, MESF, NAVELSG, and EOD units, sustainability and interoperability remain challenging issues. Beginning in FY 2003 (see Figure 4-1), significant funding increases from Congressional Adds and NGREA have moved these organizations toward reducing these shortfalls. The new MCAG also faces the challenge of ensuring AC and RC sustainability and interoperability, since its current TOA allows for the outfitting of only four RC teams.

#### **d. Maintenance Issues**

The RC shares the same readiness and maintenance challenges as the AC. Since FY 2000, the CNO placed an even higher focus on maintenance funding by making current readiness a top priority, resulting in improved RC maintenance funding profiles.

#### **e. Modernization Programs and Shortfalls**

The Navy has a considerable list of unfunded equipment replacement and modernization requirements. Each year, the CNO develops an Unfunded Priority List and forwards it for resourcing consideration. The CNO's highest priority unfunded equipment requirements for the RC are provided in *Table 8*.

### **B. Changes Since Last NGRER**

The significant changes that have occurred since the last NGRER have been described in Section I, paragraph D of this document.

### **C. Future Years Program (FY 2009–FY 2011)**

#### **1. FY 2011 Equipment Requirements**

*Table 1* provides projected FY 2009–2011 major equipment inventories and requirements.

#### **2. Anticipated New Equipment Procurements**

Major equipment anticipated to be procured for the RC are two C-40A aircraft. Significant funding is being provided to MESF, NCF, and NAVELSG to procure ground equipment. *Tables 3* and *4* reflect these anticipated new equipment procurements.

#### **3. Anticipated Transfers from AC to RC**

*Table 5* provides anticipated major equipment transfers from the AC to the RC.

#### **4. Anticipated Withdrawals from RC**

*Table 5* also provides major RC equipment to be decommissioned.

#### **5. Remaining Equipment Shortages and Modernization Shortfalls at the end of FY 2011**

*Tables 1* and *8* provide RC equipment inventories, shortfalls, and modernization requirements.

### **D. Summary**

The Navy is seamlessly integrating the RC and AC into a cohesive Total Force capable of meeting all operational requirements. U.S. seapower will be globally postured to secure our homeland and citizens from direct attack and to advance our interests around the world. As our security and prosperity are inextricably linked with those of other U.S. maritime forces, we will deploy to protect and sustain the peaceful global system comprised of interdependent networks of trade, finance, information, law, people, and governance.

We will employ the global reach, persistent presence, and operational flexibility inherent in U.S. seapower to accomplish key tasks. Where tensions are high or where we wish to demonstrate to

our friends and allies our commitment to security and stability, U.S. maritime forces will be characterized by regionally concentrated, forward-deployed task forces with the combat power to limit regional conflict and deter major conflicts, and should deterrence fail, win our Nation's wars as part of a joint or combined campaign.

Navy Reservists stand ready to answer the periodic and predictable call to provide operational support to the Fleet and Combatant Commanders in support of our global maritime mission.

## Consolidated Major Item Inventory and Requirements

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
<b>AIRCRAFT</b>							
AIRCRAFT, TRANSPORT, C-9B (SKYTRAIN)	C-9B	\$10,553,000	15	15	15	15	15
AIRCRAFT, TRANSPORT, DC-9 (SKYTRAIN)	DC-9	\$11,327,000	1	1	0	0	0
AIRCRAFT, TRANSPORT, C-40A (BOEING 737-700)	C-40A	\$61,250,000	9	9	10	10	17
AIRCRAFT, TRANSPORT, C-130T (HERCULES)	C-130T	\$27,385,000	19	19	19	19	19
AIRCRAFT, TRANSPORT, C-20A (GULFSTREAM)	C-20A	\$18,000,000	1	1	1	1	1
AIRCRAFT, TRANSPORT, C-20D (GULFSTREAM)	C-20D	\$21,135,000	2	2	2	2	2
AIRCRAFT, TRANSPORT, C-20G (GULFSTREAM)	C-20G	\$31,349,000	4	4	4	4	4
AIRCRAFT, TRANSPORT, C-37A (GULFSTREAM)	C-37A	\$46,684,000	1	1	1	1	1
AIRCRAFT, TRANSPORT, C-37B (GULFSTREAM)	C-37B	\$44,305,000	3	3	3	3	3
AIRCRAFT, TRANSPORT, UC-12B (KING AIR)	UC-12B	\$2,445,000	5	5	5	5	5
AIRCRAFT, PATROL, P-3C (ORION)	P-3C	\$71,953,000	12	12	12	12	12
AIRCRAFT, EARLY WARNING, E-2C (HAWKEYE)	E-2C	\$93,246,000	6	6	6	6	6
AIRCRAFT, EARLY WARNING, EA-6B (PROWLER)	EA-6B	\$84,463,000	4	4	4	4	4
AIRCRAFT, FIGHTER/ATTACK, F/A-18A+ (HORNET)	F/A-18A+	\$52,246,000	12	12	12	12	12
AIRCRAFT, FIGHTER/ATTACK, F/A-18C (HORNET)	F/A-18C	\$53,345,000	12	12	12	12	12
AIRCRAFT, FIGHTER, F-5E (FREEDOM FIGHTER)	F-5E	\$10,552,000	3	0	0	0	0
AIRCRAFT, FIGHTER, F-5F (FREEDOM FIGHTER)	F-5F	\$14,716,000	2	3	3	3	3
AIRCRAFT, FIGHTER, F-5N (FREEDOM FIGHTER)	F-5N	\$715,000	29	29	29	29	44
HELICOPTER, COMBAT, MH-60S (SEAHAWK)	MH-60S	\$19,924,000	8	8	8	8	8
HELICOPTER, COMBAT SAR, HH-60H (SEAHAWK)	HH-60H	\$15,038,000	10	10	10	10	10
HELICOPTER, MINEWAR, MH-53E (SEA DRAGON)	MH-53E	\$21,757,000	8	8	8	8	8
HELICOPTER, ASW, FRIGATE, SH-60B (SEAHAWK)	SH-60B	\$18,542,000	6	6	6	6	6
<b>SHIPS</b>							
FRIGATE, GUIDED MISSILE (PERRY CLASS) FLIGHT III	FFG	\$341,207,000	9	9	9	9	9
SHIP, MINE COUNTERMEASURES (AVENGER CLASS)	MCM	\$159,590,199	1	0	0	0	0
<b>NAVAL COASTAL WARFARE FORCES</b>							
MIUW SURVEILLANCE SYSTEM	RSSC/MSP	\$6,106,500	4	4	4	4	4
BOAT, INSHORE (NCW)	IBU	\$5,899,500	16	16	16	16	16
MOBILE ASHORE SUPPORT TERMINAL	MAST	\$4,140,000	8	8	8	8	8
<b>RESERVE NAVAL CONSTRUCTION FORCES</b>							
NAVAL CONSTRUCTION REGIMENT TOA	NCR	\$3,161,017	4	4	4	4	4
NAVAL CONSTRUCTION FORCE SPT UNIT TOA	NCFSU	\$91,861,873	1	1	1	1	1
NAVAL MOBILE CONSTRUCTION BATTALION TOA	NMCB	\$47,159,931	12	12	12	12	12

**USNR**

Table 1

**Consolidated Major Item Inventory and Requirements**

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Unit Cost</b>	<b>Begin FY 2009 QTY O/H</b>	<b>Begin FY 2010 QTY O/H</b>	<b>Begin FY 2011 QTY O/H</b>	<b>End FY 2011 QTY O/H</b>	<b>End FY 2011 QTY REQ</b>
<b>NAVAL EXPLOSIVE ORDNANCE DISPOSAL FORCES</b>							
NAVAL RESERVE FORCE EOD MOBILE UNITS TOA	NRFMU	\$5,075,203	4	4	4	4	4
<b>NAVAL EXPEDITIONARY LOGISTICS SUPPORT GROUP</b>							
MATERIAL HANDLING EQUIPMENT ITEMS	NAVELSG-MHE	\$4,347,000	1	1	1	1	1
CIVIL ENGINEERING SUPPORT EQUIPMENT ITEMS	NAVELSG-CESE	\$15,421,500	1	1	1	1	1

**USNR**

Table 2

**Average Age of Equipment**

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

Nomenclature	Equip No.	Average Age	Remarks
<b>AIRCRAFT</b>			
AIRCRAFT, TRANSPORT, C-9B (SKYTRAIN)	C-9B	31	
AIRCRAFT, TRANSPORT, DC-9 (SKYTRAIN)	DC-9	34	Aircraft will be phased out of CNAFR inventory in FY 2010.
AIRCRAFT, TRANSPORT, C-40A (BOEING 737-700)	C-40A	4	
AIRCRAFT, TRANSPORT, C-130T (HERCULES)	C-130T	13	
AIRCRAFT, TRANSPORT, C-20A (GULFSTREAM)	C-20A	24	Aircraft scheduled to expire, at current usage rate, in 2012.
AIRCRAFT, TRANSPORT, C-20D (GULFSTREAM)	C-20D	21	
AIRCRAFT, TRANSPORT, C-20G (GULFSTREAM)	C-20G	13	
AIRCRAFT, TRANSPORT, C-37A (GULFSTREAM)	C-37A	6	
AIRCRAFT, TRANSPORT, C-37B (GULFSTREAM)	C-37B	4	
AIRCRAFT, TRANSPORT, UC-12B (KINGAIR)	UC-12B	26	
AIRCRAFT, PATROL, P-3C (ORION)	P-3C	28	
AIRCRAFT, EARLY WARNING, E-2C (HAWKEYE)	E-2C	16	
AIRCRAFT, EARLY WARNING, EA-6B (PROWLER)	EA-6B	21	Aircraft will be phased out of CNAFR inventory in FY 2012.
AIRCRAFT, FIGHTER/ATTACK, F/A-18 (HORNET)	F/A-18	20	F/A-18A+ = 23 years, F/A-18C = 17 years
AIRCRAFT, FIGHTER, F-5 (FREEDOM FIGHTER)	F-5E/F/N	34	
HELICOPTER, COMBAT SAR, HH-60H (SEAHAWK)	HH-60H	17	
HELICOPTER, COMBAT SAR, MH-60S (SEAHAWK)	MH-60S	5	
HELICOPTER, MINEWAR, MH-53E (SEA DRAGON)	MH-53E	17	
HELICOPTER, ASW, FRIGATE, SH-60B (SEAHAWK)	SH-60B	23	
<b>SHIPS</b>			
FRIGATE, GUIDED MISSILE (PERRY CLASS) FLIGHT III	FFG	25	
SHIP, MINE COUNTERMEASURES (AVENGER CLASS)	MCM	19	
SHIP, MINE HUNTER, COASTAL (OSPREY CLASS)	MHC	13	

**Service Procurement Program - Reserve (P-1R)**

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

<b>Nomenclature</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>
<b>AIRLIFT AIRCRAFT</b>			
C-40A	\$154,994,000		\$83,004,000
<b>MODIFICATION OF AIRCRAFT</b>			
H-53 SERIES	7,412,000	7,494,000	7,675,000
C-130 SERIES	356,000	370,000	422,000
CARGO/TRANSPORT A/C SERIES	17,952,000	18,118,000	18,503,000
<b>SMALL BOATS</b>			
STANDARD BOATS	637,000	1,082,000	1,103,000
<b>CIVIL ENGINEERING SUPPORT EQUIPMENT</b>			
PASSENGER CARRYING VEHICLES		577,000	573,000
CONSTRUCTION & MAINTENANCE EQUIPMENT		224,000	447,000
FIRE FIGHTING EQUIPMENT	446,000	452,000	464,000
TACTICAL VEHICLES	10,969,000	11,481,000	11,787,000
ITEMS UNDER \$5 MILLION		1,467,000	1,478,000
<b>SUPPLY SUPPORT EQUIPMENT</b>			
MATERIALS HANDLING EQUIPMENT	1,151,000	1,168,000	1,190,000
<b>COMMAND SUPPORT EQUIPMENT</b>			
C4ISR EQUIPMENT	7,503,000	7,637,000	7,764,000
PHYSICAL SECURITY EQUIPMENT	459,000	4,198,000	2,180,000
<b>TOTAL</b>	<b>\$201,879,000</b>	<b>\$54,268,000</b>	<b>\$136,590,000</b>

### National Guard and Reserve Equipment Appropriation (NGREA) Procurements

*NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.*

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
C-130 AVIONICS UPGRADES	1,157,000			
C-130/C-9 UPGRADES		11,118,000		
MH-60S SUPPLEMENTAL AVIATION SUPPLY SUPPORT (SASS) KITS	5,600,000			
MH-60S ARMED HELO KITS	1,500,000			
NAVAL CONSTRUCTION FORCE EQUIPMENT	11,612,000	12,258,000		Note 1
NAVAL COASTAL WARFARE EQUIPMENT	5,753,000	5,945,000		Note 1
NAVAL EXPEDITIONARY LOGISTICS SUPPORT FORCE (NAVELSF) TOA EQUIPMENT	3,975,000	3,223,000		Note 1
NAVAL EXPLOSIVE ORDNANCE DISPOSAL (EOD) FORCE VEHICLES, C4ISR COMM GEAR, & EQ KITS		2,315,000		
TWIN GENERAL LUFFING (TGL) SERIES HAGGLUND CRANES FOR CARGO HANDLING BATTALIONS			3,800,000	
TACTICAL VEHICLES FOR EOD OPERATIONAL SUPPORT UNITS (EODSUs)			1,062,000	
TACTICAL VEHICLES FOR SEABEE UNITS AND RESERVE SUPPORT SITES (RSSs)			6,000,000	
TRUCKS - TRAILERS			1,012,000	
C-40 OXYGEN WALK AROUND BOTTLES			1,000,000	
MARITIME PREPOSITIONING FORCE UTILITY BOATS (MPFUBS)			3,484,000	
C-40A WINGLET (SETS)			7,500,000	
FLOODLIGHT SETS FOR MARITIME EXPEDITIONARY SECURITY FORCE (MESF) UNITS			110,000	
ROUGH TERRAIN FORKLIFTS FOR EODSU SEVEN AND MESF UNITS			426,000	
CONSTRUCTION EQUIPMENT FOR EOD UNITS			440,000	
ITEMS UNDER \$5M (TRUCKS) FOR EOD UNITS			128,000	
WEIGHT HANDLING EQUIPMENT (CRANES)			4,000,000	
LIGHT SERVICE SUPPORT VEHICLES (LSSVs) FOR MESF UNITS			300,000	
STANDARD BOAT FOR EODSU SEVEN			140,000	
4X2 VANS			44,000	
CONSTRUCTION EQUIPMENT FOR RSS			10,000,000	
15-PASSENGER VANS FOR MESF UNITS			76,000	
ITEMS UNDER \$5M (KITS)			3,675,000	
INFORMATION SYSTEMS SECURITY PROGRAM (IDENTITY ACCESS DEVICE - REMOTE ACCESS)			1,498,500	
<b>TOTAL</b>	<b>29,597,000</b>	<b>34,859,000</b>	<b>44,695,500</b>	
<p>Note 1: Used for procurement of Tactical Vehicles, Civil Engineering Support Equipment, Materiel Handling Equipment and Communication Equipment to support unit wartime Table of Allowance requirements.</p>				

### Projected Equipment Transfer/Withdrawal Quantities

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the AC receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

<b>Nomenclature</b>	<b>Equip No.</b>	<b>FY 2009 Qty</b>	<b>FY 2010 Qty</b>	<b>FY 2011 Qty</b>	<b>Remarks</b>
AIRCRAFT, TRANSPORT, DC-9 (SKYTRAIN)	DC-9		-1		Retirement due to obsolescence. Never received C-9B Phase II avionics upgrade. Last DC-9 in Navy inventory.
AIRCRAFT, FIGHTER, F-5F (FREEDOM FIGHTER)	F-5F	+1			F-5E and F-5F combined and delivered as a F-5F.
AIRCRAFT, FIGHTER, F-5E (FREEDOM FIGHTER)	F-5E	-3			Three F-5E donor aircraft being struck after combining with F-5N aircraft.
SHIP, MINE COUNTERMEASURES (AVENGER CLASS)	MCM 1 Class	-1			MCM will transition to active in order to support C5F MIW crew rotation.

### FY 2005 Planned vs Actual Procurements and Transfers

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGREA columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b><u>FY 2005 PLANNED TRANSFERS &amp; WITHDRAWALS</u></b>							
AIRCRAFT, TRANSPORT, DC-9	DC-9	-1	-1				
AIRCRAFT, EARLY WARNING, E-2C	E-2C	-2	-2				
AIRCRAFT, PATROL, P-3C	P-3C	-12	0				
AIRCRAFT, TRANSPORT, UC-12B	UC-12B	-2	0				
AIRCRAFT, FIGHTER/ATTACK, F/A-18A	F/A-18A	-6	-6				
<b><u>FY 2005 P-1R EQUIPMENT</u></b>							
<b>AIRCRAFT PROCUREMENT</b>							
C-40A				\$65,224,000	\$64,922,000		
C-37				0	106,138,000		
<b>MODIFICATION OF AIRCRAFT</b>							
ADVERSARY				5,465,000	5,089,000		
H-46 SERIES				237,000	236,000		
H-53 SERIES				6,728,000	6,697,000		
C-130 SERIES				11,282,000	11,229,000		
CARGO/TRANSPORT A/C SERIES				912,000	907,000		
<b>SHIPS SUPPORT EQUIPMENT</b>							
DIVING AND SALVAGE EQUIPMENT				103,000	103,000		
<b>CIVIL ENGINEERING SUPPORT EQUIPMENT</b>							
GENERAL PURPOSE TRUCKS				34,000	34,000		
CONSTRUCTION & MAINTENANCE EQUIP				30,000	30,000		
FIRE FIGHTING EQUIPMENT				837,000	831,000		
TACTICAL VEHICLES				12,278,000	15,173,000		
ITEMS UNDER \$5 MILLION				991,000	984,000		
<b>SUPPLY SUPPORT EQUIPMENT</b>							
MATERIALS HANDLING EQUIPMENT				1,304,000	1,295,000		
<b>PERSONNEL &amp; COMMAND SUPPORT EQUIPMENT</b>							
C4ISR EQUIPMENT				21,796,000	21,647,000		
<b><u>FY 2005 NGREA EQUIPMENT</u></b>							
F/A-18A AIRCRAFT EQUIPMENT						\$13,713,320	\$9,813,320
F-5 AIRCRAFT PROCUREMENT						8,000,000	11,200,000
F-5 AIRCRAFT SIMULATOR						0	700,000
NAVAL CONSTRUCTION FORCE - TACTICAL VEHICLES						9,570,000	11,080,000
NAVAL COASTAL WARFARE EQUIPMENT						5,657,680	8,585,270
NAVAL EXPEDITIONARY LOGISTICS SPT FORCE EQ						1,505,000	2,436,410
DISTRIBUTED COMMON GROUND STATION EQ						1,400,000	0
<b>TOTAL</b>				<b>\$127,221,000</b>	<b>\$235,315,000</b>	<b>\$39,846,000</b>	<b>\$43,815,000</b>

**Major Item of Equipment Substitution List**

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No

**Service Does Not Use Substitution To Satisfy  
Major Item Equipment Requirements**

### Significant Major Item Shortages

*NOTE: This table provides a RC top ten prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	C-40A Procurement	17	4	\$79,245,498	\$316,981,992	Legacy C-9 aircraft do not meet operational requirement for range/payload. Recap necessary due to C-9's increasing operating and depot costs, decreasing operational availability, and inability to meet future FAA / International Civil Aviation Organization (ICAO) avionics / engine mandates required to operate worldwide.
2	Maritime Expeditionary Security Force Table of Allowance (TOA) Equipment	Various	Various	Various	\$92,437,000	Replacement of over-aged tactical vehicles, Civil Engineering Support Equipment (CESE), and communications equipment are needed to improve operational support of OEF and OIF.
3	Explosive Ordnance Disposal (EOD) TOA Equipment	Various	Various	Various	\$43,935,000	EOD reserve personnel require dive and protective gear, up-armored vehicles, boats, and communications gear to improve operational support of OEF and OIF.
4	Naval Construction Force Tactical Vehicles and Support Equipment	Various	Various	Various	\$44,065,000	Tactical vehicles, CESE, and communications equipment are needed to improve operational support of OEF, OIF, and Homeland Defense.
5	Naval Expeditionary Logistics Support Group TOA Equipment	Various	Various	Various	\$46,698,000	Tactical vehicles and CESE needed to fill shortfalls for support of OEF, OIF, and Homeland Defense.
6	C-130 Compliance	19	19	Various	\$102,920,000	Upgrade required to comply with Computerized Navigation System/Air Traffic Management ICAO requirements. Obsolete power sources/analog avionics becoming unsupportable. Defensive electronic countermeasure equipment enabling them to operate in high threat Area of Responsibilities (AOR), in accordance with AOR rules of engagement. ICAO is to be implemented in three phases: 2009, 2012, and 2014.
7	Marine Prepositioning Force Utility Boats	10	6	\$871,000	\$5,226,000	Assault Craft Units 1 and 2 Active Component (AC) replacing their Landing Craft Medium 8s (LCM8s) with more capable Maritime Prepositioning Force Utility Boats (MPFUB) in support of the Maritime Protection Force mission. Replacement of RC LCM8s with the MPFUB required for compatibility with AC equipment.

**Significant Major Item Shortages**

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
8	F/A-18A+ ECP-560R4 Upgrade	24	24	Various	\$69,600,000	Provide funding for upgrades to 24 F/A-18A+ (ECP-560) aircraft to ECP-583 R4 capability, creating a sustainable platform that meets the Sea Power 21 baseline Strike Fighter while supporting SEASTRIKE interoperability.
9	EA-18G Growler Procurement	5	5	\$78,800,000	\$394,000,000	Fund the purchase of 5 EA-18G aircraft for RC transition to mitigate the Airborne Electronic Attack capacity and capability gap in 2012.
10	F-5 Radar/Electronic Attack (EA) Upgrade	44	44	Various	\$148,340,000	Directly addresses 63% DoN shortfall for radar-equipped adversary support. Due to evolving threats and DoN counterair tactics, non-radar equipped F-5s no longer provide the qualitative level of support required to train deploying forces, directly threatening the assumption fleet aviators can generate the COCOM-directed effects their hardware is theoretically capable of performing. EA is an inexpensive, highly portable technology capable of disrupting possible COCOM-directed counterair effects in potential future conflicts. The DoN cannot train to these solutions without DRFM EA pods to practice against. DoN requires 18 additional DRFM EA pod systems for training.

## **Chapter 5 United States Air Reserve Components**

### **I. United States Air Force Overview**

#### **A. Air Force Planning Guidance**

The mission of the Air Force (AF) is to deliver sovereign options for the defense of the United States of America and its global interests—to fly and fight in air, space, and cyberspace. The AF accomplishes this mission by providing rapid strike, global mobility, and persistent command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) to joint force commanders every day. The AF fully integrates the air, space, and cyberspace power of the Active and Reserve component (RC) forces into a Total Force to achieve success. The Air Reserve component (ARC) is comprised of ANG and AF Reserve (AFR) units supporting the Total Force. The dynamic roles and missions of the Total Force are responsive to changing security requirements both on the world stage and at home.

Adversaries seek to challenge the United States through non-traditional capabilities and methods. The AF must be prepared to face a wide range of future contingencies across the spectrum of conflict emerging in this new security environment. The AF is meeting these challenges with a smaller, more effective force as it continues to recapitalize legacy systems and infrastructure to develop necessary capabilities for the future. These efforts are occurring in an environment of diminishing resources used to ensure continued air, space, and cyberspace dominance into the future.

The RC has traditionally provided a strategic reserve capability to surge and augment wartime combat operations. However, the RC has increasingly been utilized to provide operational reserve capacity for training and augmenting current operations. As a result, in most cases RC forces are equipped to the same standards as the Active component (AC) and have become more integrated with them on a day-to-day basis.

#### **B. Air Force Equipping Policy**

The National Defense Authorization Act of FY 2000 directed the Services to “conduct a comprehensive examination...of the national defense strategy, force structure, force modernization plans, infrastructure, budget plans, and other elements of the defense program and policies of the United States...” This examination, known as the Quadrennial Defense Review (QDR), has shifted the basic model for defense planning from threat-based to capabilities-based planning. This laid the foundation for the AF equipping policy.

In FY 2005, the AF formalized Total Force Integration resulting in 138 initiatives by June 2007 that assigned new emerging missions to Guard and Reserve units and greatly expanded the number of associated units. ARC missions now include the latest AF weapon systems including the C-17, F-22A, MQ-1, MQ-9, distributed ground stations, Component Headquarters, and Space operations. Sixty-five of these initiatives involve associate relationships between Active, Reserve, and Guard component units sharing equipment. Classic unit associations have existed in the AF since the 1970s when AFR crews started inter-flying with AC crews on strategic airlift aircraft. By 2010, AC and RC forces will share operations on almost every major AF weapon system with one component having primary ownership of the equipment while the other provides

only personnel to conduct augmentation and surge operations. The AF vision includes significant increases in associated units.

The ARC, including both unit-equipped and associated units, can be equipped in several ways:

- The AF plans, programs, and budgets for the procurement, transfer and modernization of ARC weapons systems through the AF Corporate Structure.
- Congress authorizes and appropriates funding for the AF to fulfill specific ARC requirements.
- Congress authorizes additional single year procurement funding through the National Guard and Reserve Equipment Appropriation (NGREA).
- Congressional adds additional funding to the AF procurement account specifically for RC equipment.

### **C. Plan to Fill Modernization Shortages in the RC**

Effective modernization of ARC assets is the key to remaining a relevant and capable combat ready force. With the onset of the Persian Gulf War in 1991 and because of ensuing force reductions throughout the 1990s, the U.S. military has become increasingly dependent on the RCs to conduct operational and support missions around the globe. The events of September 11, 2001 validated the AF Total Force policy. The ARC is working shoulder-to-shoulder with the AC to win the GWOT and protect the homeland. No longer a force held in reserve, the ARC shares the tip of the spear.

The AF continues to make significant improvement in modernizing and equipping the Reserve and Guard on par with the AC. However, fiscal constraints still result in shortfalls in ARC modernization and equipment. The AF has charged the lead commands with keeping the ARC a relevant and capable fighting force. Success in meeting ARC modernization goals depends on robust interaction with the lead commands and keeping Congressional budgeting authorities informed of ARC requirements. Although there are no major issues affecting the full mobilization of the ARC, modern equipment would provide a full spectrum of capabilities consistent with the AC.

### **D. Initiatives Affecting RC Equipment**

The AF has committed to modernizing the ARC to ensure that the ARC remains a relevant and capable part of the Total Force. There are a number of modifications and modernization efforts underway to resolve reliability, maintainability, and capability issues for the ARC. The following are some of the AF modernization initiatives that affect the ARC.

#### **1. C-5 Galaxy**

##### **a. Avionics Modernization Program (AMP)**

The AMP is Phase I of a two-part modification effort to update the C-5 aircraft. The AMP replaces unreliable and unsupportable engine, flight instrument, and flight system components. It also installs Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) and Secretary of Defense-directed navigation and safety modifications for the Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS).

## **b. Reliability Enhancement and Re-engining Program (RERP)**

The RERP is Phase II of the C-5 modernization effort and is designed to improve C-5 reliability, maintainability, and availability while increasing wartime mission capability rates to at least 75 percent. RERP replaces the TF-39 with the General Electric F138-GE-100. The proposed new engine meets Stage III noise and emissions standards while improving payload capability and time-to-climb criteria needed to meet airspace requirements. Reliability enhancements include upgrades or replacement of auxiliary power units, and upgrades to the electrical, hydraulic, fuel, fire suppression, pressurization, air conditioning, landing gear, and airframe systems.

## **2. F-16 Fighting Falcon**

### **a. Falcon STAR and Common Configuration Improvement Program (CCIP)**

The purpose of the Falcon STAR (Structural Augmentation Roadmap) program is to replace or rework known life-limited structural parts to preclude the onset of widespread fatigue damage, maintain safety of flight, enhance aircraft availability, and extend the life of affected components up to 8,000 hours. The CCIP for the ANG Block 42 and 52 aircraft brings helmet mounted cueing, Link-16 data link, and improved computing power.

### **b. ARC-210 Radio**

The addition of limited numbers of ARC-210 radios to the ANG F-16 fleet directly addresses the in-theater requirement for improved secure line-of-sight communications and emerging requirements for image transfer and beyond line-of-sight connectivity.

### **c. Commercial Fire Control Computer (CFCC)**

The CFCC is critical to all future upgrades in the Block 30 series F-16. This computer update allows for the employment of the Small Diameter Bomb, the Joint Helmet-Mounted Cueing System (JHMCS), and Mode V advanced combat identification features.

## **3. A-10 Thunderbolt II**

### **a. Precision Engagement**

The Precision Engagement (PE) program is the number one priority for the A-10 community and will transform the A-10 cockpit and capability. The A/OA-10 remains a legacy weapon system, yet is expected to execute critical wartime taskings such as airborne forward air controller, close air support, combat search and rescue, and air interdiction. The aircraft computer, cockpit displays, and weapons delivery capabilities are outdated and contribute to high pilot workload. The PE program delivers a new avionics suite, a data link and precision weapons capability that will keep the aircraft viable and increase its lethality and survivability.

### **b. Replacement Wings**

Of the AF's 356 A-10 aircraft, 242 have wings that are thin-skinned and require extensive wing refurbishment or replacement to prevent aircraft grounding beginning in FY 2011. The A-10 Replacement Wing program is fully funded and on track. This program will replace all 242 wings on active, guard, and reserve A-10s.

### **c. A-10 Missile Approach Warning System**

The A-10 flies many of its missions at altitudes where it is particularly vulnerable to shoulder-launched, infrared (IR) surface-to-air missiles (SAM). The aircraft needs a missile warning system that notifies the pilot when a SAM is launched and automatically dispenses countermeasures. The AAR-47 is a passive, missile-approach warning system that when installed on the A-10 consists of four IR sensor assemblies, a central processing unit and a control indicator. The AAR-47 is capable of detecting missile launches from 360 degrees around the aircraft.

## **4. F-15 Eagle**

### **a. APG-63(V)3 Active Electronically Scanned Array (AESA) Radar**

The APG-63(V)3 AESA radar will replace the current APG-63(V)0 mechanically scanned radar with a stationary panel covered with an modular array of transmitter-receiver modules. AESA provides significant increases in precision to detect, track, and eliminate multiple threats faster and with greater efficiency. Additionally, AESA eliminates the hydraulic and electrical systems associated with mechanically operated radars resulting in dramatically improved reliability and maintainability. In FY 2006, Congress appropriated \$52.2M to procure six AESA systems for the ANG. In FY 2007, Congress appropriated \$72M for procurement of eight AESA radars for the ANG F-15C fleet. The current APG-63V0 radar is logistically unsupportable due to parts obsolescence and needs a reliability and maintainability upgrade. The ANG requires a minimum of 48 AESA systems to maintain a constant HLD presence throughout the United States.

### **b. F-15 Very High Speed Integrated Circuitry Central Computer (VHSIC CC) Plus: VCC+**

Current F-15 A-D VHSIC CC has reached its maximum processing throughput. Increased processing and memory growth are needed to support future Combat Air Forces (CAF) Operational Flight Program (OFP) requirements. VCC+ is required by Combat Air Forces F-15 A-D OFP Suite 6. If not funded, ANG F-15A-Ds will not be able to field Suite 6. As a result, Mode S Interrogation, Combat ID improvements, future hardware improvements and weapon system modernization will not be attainable.

## **5. KC-135 Stratotanker**

### **a. Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) Modification**

This program will provide an upgraded avionics suite that meets the requirements for aircraft interoperability within the future aerospace environment. The avionics suite will be improved in four major functional areas: communications, navigation, safety and surveillance, and flight deck control. The program includes controller-pilot data link communication, direct voice communication with air traffic control, required navigation performance, and automatic dependent surveillance.

## **6. C-130 Hercules**

### **a. Phase I—Avionics Modernization Program (AMP)**

This program will produce a baseline avionics configuration across the current C-130 fleet. Air Mobility Command (AMC), in coordination with Air Combat Command (ACC), the ARC, and AF Special Operations Command (SOCOM), is undertaking the C-130 AMP to consolidate E, H1, H2, and H3 aircraft into one configuration. The goal is to consolidate existing and projected aircraft modification programs to upgrade and standardize the aging C-130 fleet.

## **7. RC-26B Aircraft**

### **a. SOCOM Modification Block 25**

The RC-26B was tasked in December 2006 to support OIF, and GWOT funded modifications were made to five of the 11 ANG RC-26Bs to be deployed. The aging Wescam 14QS electro-optical sensor was replaced with the next generation MX 15 forward-looking infrared (FLIR) and video system. The new system has full motion video and line of sight (LOS) downlink. The modification also added voice satellite communication, signal intelligence capability, aircraft defensive systems, and low-cost cockpit modifications to make the aircraft Night Vision Imaging System (NVIS)-compatible. The current OIF deployment is slated for one year, but AF SOCOM may extend the support requirement indefinitely. The ANG is also initiating an effort to acquire ACC sponsorship for the program.

### **b. Katrina Modification Block 20**

The other 6 RC-26Bs are being upgraded with NGREA Katrina funds. The WESCAM 14QS on these 6 aircraft will be replaced by the SAFIRE HD FLIR system. Several significant software upgrades will allow quicker high quality processing of video imagery. The modification also includes the Dragoon LOS downlink system which has nearly twice the range capability as other currently fielded LOS systems. The aircraft camera pod will be removed, increasing endurance. Both the wet and digital film capability will be lost due to lack of vendors and excessive repair costs.

## **8. HC-130 Aircraft**

### **a. Rescue System Upgrades**

A low-cost NVIS-compatible lighting system modification for the AF combat rescue fleet is in the contract phase. A personnel locator system will be installed on aircraft from the 210<sup>th</sup> Rescue Squadron, Kulis, AK, the 129<sup>th</sup> Rescue Wing, Moffet, CA, and the 106<sup>th</sup> Rescue Wing, Gabreski Field, NY. This system will give rescuers bearing, range, and authentication information on downed aircrew equipped with the PRC-112 survival radio.

## **9. MQ-1 Predator**

### **a. MQ-1/MQ-9 Integrated Predator/Reaper Operation Center (POC/ROC)**

Incorporates communication intensive operations equipment in an open architecture design to smoothly integrate current and emerging needs for controlling warfighting and homeland defense missions.

### **b. Sense and Avoid Capability Kit**

Kit procurement and integration on 16 aircraft will permit operation of MQ-1 Predator within CONUS airspace in support of local authorities for disaster response, homeland security operations, and continuation training; it will also reduce potential of mid-air collisions.

### **c. Advanced Cockpit**

The Advanced Cockpit focuses on human factors to provide intuitive, pilot-like controls, and advanced visualization for Predator crews. Utilizing synthetic vision, mission crews gain enhanced situational awareness with wrap-around field and a total air and ground picture. The advanced cockpit will use an open architecture to allow full integration of aircraft, sensor, weapons control, and allows for new requirements from emerging missions.

### **d. Desktop Training System**

The Desktop Training System provides a PC-based, low-cost training device to allow formal and informal procedural training capability and review for aircrews to maintain proficiency.

## **10. F-22 Raptor**

### **a. Lot 7–9 Multi-Year Procurement (MYP)**

The F-22 Lot 7–9 MYP contract was signed 31 July 2007 and funds the procurement of 60 F-22s. The 20 F-22s in Lot 9 will be delivered to Hawaii ANG in FY 2011 and the first quarter of FY 2012.

### **b. F-22 Common Configuration**

This program includes numerous hardware modifications to reduce the current F-22 fleet of six different configurations to three configurations. This will increase efficiencies in RDT&E and sustainment, and increase combat capability of the fleet.

### **c. F-22 Modernization Plan**

This program includes Increments 2, 3.1, and 3.2. Each increment involves RDT&E and eventual installation of hardware and software that increases F-22 capabilities. Some capabilities include 4<sup>th</sup> Gen AESA radar, Small Diameter Bomb integration, AIM-120D and AIM-9X integration, Auto GCAS, and Advanced Data Link.

#### **d. Reliability and Maintainability Maturation Program (RAMMP)**

This program modifies hardware on existing F-22s to increase the fleet's reliability and maintainability. It is the only program that helps the F-22 attain its Operational Requirements Document (ORD) requirement of 3.0 hours Mean Time Between Maintenance (MTBM) by 100K fleet hours. This program includes 67 active projects.

#### **e. F-119 Engine Modifications**

This program modifies F-22 PW F-119 engines to improve safety, reliability, maintainability, sustainability, and mission performance.

#### **f. Weapon System Evaluation Program (WSEP)**

This program modifies F-22s to allow the aircraft to relay signals between telemetry ground stations and missiles carried in the internal weapons bays.

### **11. JSTARS Aircraft**

#### **a. Re-engining**

This modification upgrades the Joint Surveillance Target Attack Radar System (JSTARS) fleet of 17 operational aircraft, one test aircraft, and one in-flight trainer aircraft with a new Propulsion Pod System (PPS) in order to meet current ORD requirements. The re-engining program includes the purchase and installation of new engines, thrust reversers, nacelles, pylons, fan, exhaust duct, and all associated components and initial spares along with the upgrade of training devices. The program will dramatically improve the capabilities of the aircraft with respect to thrust; thereby improving time to climb, time on station, service ceiling while on station, fuel efficiency, and will allow JSTARS to comply with International Civil Aviation Organization (ICAO) noise and emissions requirements.

### **12. Distributed Common Ground System (DCGS)—AN/GSQ-272 SENTINEL**

#### **a. ARC Units - Distributed Ground Stations (DGS)**

There are ANG units in 11 states (AL, AR, CA, GA, HI, IN, KS, MA, NV, UT, and VA) conducting SENTINEL operations, and ANG units in two other states (OH and TX) providing support to SENTINEL operations. Two new standalone ANG sites in Indiana and Massachusetts are being established in FY 2008, as well as ANG and AFR classic associate units at Beale AFB, CA and ANG classic associate units at Langley AFB, VA; Fort Gordon, GA; and Hickam AFB, HI.

#### **b. Weapon System Modernization**

AF is continuing efforts to provide modernization to the ARC's of DCGS. These efforts include upgrade of the Nevada DGS site to 10.2 baseline, and potential build of an unclassified Homeland Defense/Defense Support network to Civil Authorities.

### **13. Air and Space Operations Center Weapon System (AOC WS)**

#### **a. AOC-WS Integration Development**

The AOC-WS provides the Joint/Combined Force Air Component Commander (J/CFACC) the capability to exercise operational-level command and control (C2) of air and space operations worldwide. The AOC-WS Integration Development is an ongoing project to develop AOC infrastructure and integrate C2 and intelligence, surveillance and reconnaissance (ISR) capabilities through software and hardware improvements to the AOC-WS baseline. This project will help ensure the AOC WS remains a viable weapon system to meet the warfighter needs. Planned improvements will continue to enhance the AOC C2 of ISR in terms of interoperability and net-centricity, thus improving the C2 of air and space assets while reducing “kill chain”. The RC AOC augmentation forces will require improved training capabilities and reachback/distributed operations connectivity as the AOC WS modernizes to ensure they can maintain currency in AOC systems and processes, as well as, provide support to the AOC units they augment.

#### **E. Plan to Achieve Full Compatibility between AC and RC**

Although the ARC has some older equipment, the AF, through the Total Force policy, continues to modernize ARC assets to achieve and maintain equivalency as an integrated force. These modernization efforts will allow the ARC to remain relevant and combat ready on par with the AC. ARC unit equipment readiness is reported according to the same standards as AC units to measure their capability to meet combatant commander requirements. Reset and modernization of ARC equipment are prioritized using the same criteria applied to AC equipment.

## II. Air National Guard Overview

### A. Current Status of the Air National Guard

#### 1. General Overview

The ANG has a rich history of defending and protecting America’s interests at home and abroad. From humble beginnings—four units and 108 members in 1946—to a force that delivers one third of the AF’s combat power, the contributions of our citizen Airmen are without equal. Since September 11, 2001, the ANG has flown more than 163,000 sorties and over 519,000 hours in support of Operations Noble Eagle (ONE), OEF, and OIF. We continue to dominate the battlespace in the GWOT. The innovative spirit, foresight, and tenacity displayed by our citizen Airmen have allowed our force to transform into an indispensable partner of today’s Total Force. Our culture of focused transformation will give us the decisive operational capability needed to always remain several steps ahead of our adversaries. Our goal is to be lethal while compressing the “kill chain” to minutes instead of hours or days. Accomplishing this requires innovative thinking from all of our personnel involved in system development, acquisition, testing, fielding, and operational employment.

The ANG is committed to the fundamental principle that every state and territory must possess 10 core capabilities for homeland readiness, as well as, the modernization and recapitalization required to keep our forces “Guarding America” and “Defending Freedom,” by performing military missions tasked by the State or Federal authorities, now and in the future. With limited resources, our capabilities-based effort focuses on modernizing and recapitalizing our aircraft and equipment to protect our Homeland, fight the GWOT, and transform for the future.

The ANG’s Modernization Program process is founded on validated AF and combatant commander requirements. It is vetted in an open forum of weapons systems experts and warfighters at an annual Weapons and Tactics Conference, and approved by the Director, ANG. This process culminates in a completely documented and updated annual ANG Weapons Systems Modernization Requirements publication. The latest process documented a \$6.4B dollar modernization and recapitalization shortfall for the ANG.

#### Top ANG Equipping Challenges

- Homeland Defense—CNGB’s “Essential 10”
- Precision Strike—Advanced Targeting Pods, Helmet Mounted Cueing Systems, Advanced Avionics
- Network Operations—BLOS/SLOS Radio, Multi-Function Displays, Tactical Data Link, MQ-1/MQ-9 Advancements, DCGS
- Enhanced Survivability—C-5 Defensive Systems, LAIRCM, A-10 Missile Warning, IRCM Tester
- 24-hour Operations—Night Vision Devices

## 2. Status of Equipment

### a. Equipment On-hand

#### i. Fighter/Attack/Bomber Aircraft

##### a) F-16 A/B/C/D Fighter Aircraft

The ANG has over one third of all Combat Air Force (CAF) F-16 aircraft arrayed in 23 squadrons.

Block 25/30/32: The majority of ANG F-16 aircraft are within the Block 25/30/32 Mission Design Series (MDS). These aircraft are capable of employing both Sniper XR and LITENING AT advanced targeting pods with a wide variety of laser guided and inertially aided munitions (IAMS). The Block 25/30/32 is equipped with the Enhanced Position Location Radio System/Situation Awareness Data Link that allows pilots to “see” other airborne platforms and link directly to Army and Marine Corps tactical nets. The ANG is fielding ARC-210 radios to support both deployed and homeland defense operations. The primary long-term F-16 hardware priorities are the Commercial Fire Control Computer (CFCC), Joint Helmet Mounted Cueing System (JHMCS), and additional ARC-210 secure line-of-sight (SLOS) and beyond line-of-sight (BLOS) radios.



*F-16 A/B/C/D  
Fighter Aircraft*

Block 42: The Block 42 MDS possess identical advanced targeting pod and IAMS capabilities as previous blocks. ANG Block 42s are beginning the Common Configuration Implementation Program (CCIP) modification bringing Link-16 data link, JHMCS, and other advanced capabilities. To meet ORD requirements, the Block 42 requires 24 additional F-100-PW-229 engines to increase combat capability and provide performance equivalent to Block 40 and 50 aircraft.

Block 52: The ANG Block 52 fleet is currently expanding its destruction of enemy air defenses capability as it incorporates the HARM Targeting System (HTS) R7 modification and enhanced capabilities of the LITENING AT and Sniper XR.

##### b) A-10 Attack Aircraft

The A-10 remains the premier close air support (CAS) aircraft. Other key missions include combat search and rescue (CSAR) and forward air controller-airborne (FAC-A) missions. The five ANG squadrons account for 33 percent of combat-coded A-10s in the CAF. The A-10 is undergoing the Precision Engagement (PE) program, which will modernize the cockpit, provide a data link, improve targeting pod integration, and add Joint Direct Attack Munitions (JDAM) and Wind Corrected Munitions Dispenser (WCMD) capabilities. Future A-10 improvements include a Helmet Mounted Cueing System (HMCS), updated Lightweight Airborne Recovery System (LARS) for CSAR missions, and improved self protection capabilities.



*A-10 Attack Aircraft*

c) F-15 Air Superiority Aircraft

ANG F-15s will lead the Combat Air Forces (CAF) in next generation radar capability by fielding the APG-63 (V)3 Active Electronically Scanned Array (AESA) radar starting in FY 2009. Additional modernization efforts include, Joint Helmet Mounted Cueing System (JHMCS), Very High Speed Integrated Circuitry Central Computer (VCC+) and -220E engine upgrades.



*F-15 A/B/C/D  
Air Superiority Aircraft*

d) KC-135 Air Refueling Tanker Aircraft

The 24 ANG squadrons represent 45 percent of the total force's aerial refueling aircraft. The desired end-state of the ANG KC-135 force structure is a common fleet of KC-135Rs which are Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) compliant. Upgrades on the priority list include tactical data link systems, Large Aircraft Infrared Countermeasures (LAIRCM), and night vision goggle (NVG) compatible lighting.



*KC-135 Air Refueling  
Tanker Aircraft*

e) MQ-9 Armed Reconnaissance

The MQ-9 Reaper is an unmanned aerial system (UAS) strike asset with a secondary mission of reconnaissance, surveillance, and target acquisition. The MQ-9 will be assigned to the 174<sup>th</sup> Attack Wing, Syracuse, New York ANG, as part of the AF Total Force Initiative.

**ii. Airlift Aircraft**

a) C-5A Strategic Airlift Aircraft

The ANG operates over 15 percent of the C-5 fleet; operated at the 105<sup>th</sup> Airlift Wing (AW), Stewart ANG, NY; the 164<sup>th</sup> AW at Memphis, TN; and the 167<sup>th</sup> AW at Martinsburg, WV. The Reliability Enhancement and Re-engineing Program (RERP) and the Avionics Modernization Program (AMP) are major C-5 modification programs to significantly improve the C-5A reliability, maintainability, and availability. A major C-5A deficiency is the lack of defensive systems that restrict them from operating in high threat areas.



*C-5A Strategic  
Airlift Aircraft*

b) C-17 Strategic Airlift Aircraft

The C-17 delivers cargo and troops in operations originating from the CONUS direct to forward locations. The ANG operates C-17s at the 172<sup>nd</sup> AW in Jackson, MS. The 154<sup>th</sup> AW at Hickam AFB, HI and the 176<sup>th</sup> AW at Elmendorf, AK are ANG C-17 associate units. Critical combat requirements for ANG C-17s include LAIRCM, Surface to Air Fire (SAFIRE) wide-angle lookout capability, and individual crew position flare dispenser capability.



*C-17 Strategic Airlift  
Aircraft*

c) C-130E/H Theater Airlift Aircraft

C-130E/H: The ANG's 18 C-130E/H units comprise 40 percent of the C-130 tactical airlift capability of the Mobility Air Forces (MAF). The ANG is working with Congress and AMC to obtain upgrades such as LAIRCM and an advanced situation awareness data link. The ANG is fully engaged with the C-130 AMP and the Center Wing Box (CWB) program. Infrared Defensive System Testers are a priority for the entire C-130 fleet.

d) C-130J

The C-130J is the latest generation C-130 incorporating a redesigned, two-crew member flight deck, upgraded engines, and integrated digital avionics subsystem. Organized into three wings, the ANG operates 31 C-130Js, the largest number of the C-130J tactical airlifters.



*C-130J*

**iii. Command and Control (C2)**

a) Modular Control System (MCS)

MCS is a ground-based tactical C2 system that controls aircraft and air defense weapons. The AF plans to modernize the MCS with the Battle Control System–Mobile (BCS-M).

b) Air Support Operations Center/Tactical Air Control Party (ASOC/TACP)

ASOCs and TACPs deploy in direct support of Army combat units to provide terminal control of close air support. ASOCs use a variety of communications equipment to provide connectivity throughout the theater while the TACPs rely mainly on the MRC-144.

c) Air and Space Operations Center (AOC)—AN/USQ-163 FALCONER

The AOC is the AF weapon system for planning, executing, and assessing all aerospace operations. The ANG has three AOC augmentation units that are being equipped with non-deployable AOC training suites allowing them to maintain mission ready status. Currently, these units are designed to be manpower-only units which deploy forward to support the engaged AOC.



*Air and Space Operations Center (AOC)*

**iv. Intelligence, Surveillance, and Reconnaissance (ISR)**

a) MQ-1 Predator Unmanned Aerial System (UAS)

The MQ-1 Predator is a key ISR asset capable of armed reconnaissance with AGM-114 Hellfire missiles. Predator is capable of sending imagery to tactical users on the ground via data link. The ANG is establishing Predator units in California, Nevada (associate unit support to the 432<sup>nd</sup> Wing), Arizona, North Dakota, and Texas. All units (except the NVANG) will be equipped with aircraft, Ground Control Stations (GCS), Predator Primary Satellite Link (PPSL), and Launch and Recovery Elements (LRE). FAA certification of MQ-1 flight operations



*MQ-1 PREDATOR  
Unmanned Aerial System  
(UAS)*

within commercial airspace will allow future Predator operations to include homeland defense, disaster response, and support to civil authorities.

b) E-8C Joint Surveillance Target Attack System (JSTARS)

The JSTARS is a modified Boeing 707-300 aircraft equipped with synthetic aperture radar. JSTARS supports the warfighter by locating, classifying, and tracking ground targets and data linking the imagery and tracks to ground forces. The platform will provide key joint force battle management capabilities beyond 2030. The most critical requirement is replacement of its engines that have insufficient thrust and are no longer economically sustainable.



*E-8C Joint Surveillance Target Attack Radar System (JSTARS)*

c) C-130 SENIOR SCOUT

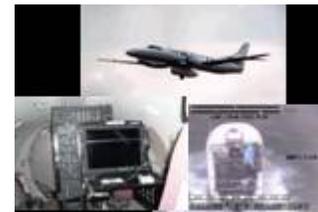
SENIOR SCOUT (SS) provides full spectrum, near-real-time signals intelligence. The system consists of a roll-on/roll-off shelter containing collection, processing, and communications equipment that is uploaded into a modified C-130E/H. The 169<sup>th</sup> Intelligence Squadron, Utah ANG, operates the program. Upgrades in FY 2007 incorporate Super Resolution Direction Finding and upgraded digital receiver engineering along with a dual monitor system to provide advanced targeting capability. Lack of a dedicated mission crew trainer and permanent C-130 aircraft is hindering full optimization of the SS program.



*C-130 SENIOR SCOUT*

d) RC-26B Counter Drug Aircraft

The role of this aircraft is expanding from counter drug missions to also include ISR operations in CONUS and OCONUS, as demonstrated by deployments to Hurricane Katrina and OIF. New equipment is required to meet the requirements for these expanded missions. The ANG is exploring the benefits of installing a streaming video downlink for near instantaneous transmission of data to personnel and law enforcement agencies on the ground. In addition, still photo capability is no longer possible, and a replacement digital camera is required to ensure continuation of this important capability.



*RC-26B "Condor" Counter Drug Aircraft*

e) AF Distributed Common Ground System (AF DCGS)–AN/GSQ-272 SENTINEL

AF DCGS is the AF weapon system for handling all processing, exploitation, and dissemination of multiple intelligence sources. Through “Reachback,” AF DCGS units are linked to ISR operations worldwide. Currently, there are four ANG stand-alone SENTINEL sites in Alabama, Arkansas, Kansas, and Nevada. New sites will be established in Indiana and Massachusetts in FY 2008. ANG integrated associate SENTINEL units are collocated and supporting AC SENTINEL sites in California and Virginia. In addition, the ANG has a stand alone Cryptologic Support Site (CSS) in Utah linked to a national mission partner and the SENTINEL enterprise. Additional manpower-only CSS units collocated with AC units will be established in FY 2008 in Georgia and Hawaii.



*AF Distributed Common Ground System (AF DCGS)*

v. Information Operations (Network and Electronic Warfare and Influence Operations)

a) EC-130J Information Operations (IO) Aircraft

This psychological operations dissemination aircraft operated by the 193<sup>rd</sup> SOW, PA has completed its conversion from the EC-130E to the EC-130J aircraft. Three EC-130Js are fully mission capable “Commando Solos,” while four await funding to complete conversion.



*EC-130J Electronic Warfare Aircraft*

b) Network Warfare (NW) Operations

The WA ANG 262<sup>nd</sup> Information Warfare Aggressor Squadron and KS ANG 177<sup>th</sup> Information Aggressor Squadron provide IO red teaming and multi-disciplinary vulnerability assessments. The 175<sup>th</sup> Information Operations Squadron, MD ANG, provides the National Security Agency signals intelligence support to IO and defensive IO. The 102<sup>nd</sup> Information Warfare Squadron, RI ANG, supports the Joint Task Force-Global Network Operations and the Defense Information Systems Agency (DISA) Field Security Operations with network defense capabilities. The UT ANG 101<sup>st</sup> Information Warfare Flight assesses full-spectrum, integrated IO and other related activities to achieve mission objectives. Additionally, ANG IO initiatives in Delaware, Texas, and Vermont provide the AF with NW capabilities and tactics; IO techniques, procedures, and test/evaluation; and education and training.



*Network Warfare Operations*

vi. Space

The ANG has six units directly supporting AF Space Command. The 137<sup>th</sup> Space Warning Squadron (SWS), Greeley, CO, provides immediate, worldwide missile warning and space launch detection. The 148<sup>th</sup> Space Operations Squadron, Vandenberg AFB, CA, operates the MILSTAR Operations Center, and controls six MILSTAR secure communications satellites. The 153<sup>rd</sup> Command and Control Squadron (CACs), F.E. Warren AFB, WY, is a Mobile Consolidated Command Center providing a mobile, survivable, and endurable C4ISR capability. The 213<sup>th</sup> SWS, Clear AFS, AK, provides tactical warning and attack assessments of ballistic missile attacks



*MILSTAR Satellite*

against North America and space surveillance capabilities using phased-array radar. The 114<sup>th</sup> Range Flight, Patrick AFB, FL, provides launch support to the Eastern Launch Range. The 119<sup>th</sup> CACS, Knoxville, TN, provides support to the U.S. Strategic Command's Space Operations Center.

## **vii. Special Airlift Mission Aircraft**

### **a) LC-130 Polar Airlift Aircraft**

The LC-130 Polar Airlift Aircraft operated by the 109<sup>th</sup> Airlift Wing, Schenectady, NY, are ski-equipped C-130s that support airlift operations to cold weather areas where other airlift aircraft cannot operate. Currently the ANG is managing an effort to acquire radar that identifies crevasses to improve safety margins when operating in the polar regions. Other efforts include acquiring new Jet Assisted Take-Off (JATO) bottles, an electronic propeller control system (EPCS), and a new eight bladed propeller to mitigate the JATO requirement.



*LC-130 Polar Airlift Aircraft*

### **b) C-38A Special Airlift Aircraft**

The 201<sup>st</sup> Airlift Squadron (DC ANG), Andrews AFB, MD, has two C-38 (Gulfstream G100) business jets used for distinguished visitor support. These aircraft will soon reach the end of their programmed life. The unit requires four C-37s (Gulfstream V) to continue the Operational Support Airlift (OSA) mission in the future. Four aircraft ensure consistent support and minimize the impact of unplanned maintenance.



*C-38A Special Airlift Aircraft*

### **c) C-40C Special Airlift Aircraft**

The ANG operates three C-40C Boeing 737-700 business jets that provide a long-range worldwide 40- to 60-passenger capability to senior DoD officials, members of Congress and the executive branch. To ensure safe and effective flight operations, one additional C-40C aircraft, with self-protection suites, is required.



*C-40C Special Airlift Aircraft*

### **d) C-21 Special Airlift Aircraft**



*C-21 Special Airlift Aircraft*

The ANG operates the C-21 aircraft from various locations to transport high-level DoD personnel. Avionics upgrades are required to ensure operations in the face of changing regulations for domestic and worldwide travel.

### **viii. Combat Rescue Aircraft**

#### **a) HH-60G Combat Rescue Helicopter**

The ANG operates 18 HH-60Gs in three units. Ongoing programs include AN/ARS-6v12 to improve situational awareness and communication with isolated personnel, Crashworthy Flight Engineer/Aerial Gunner seats, Color Multi-Function Display System (CMFDS) with Enhanced Position Location Reporting System/Situation Awareness Data Link (EPLRS/SADL), aircraft defensive armament upgrade, and tactical threat receiver to give critical in-flight threat information.



*HH-60G Combat Rescue Helicopter*

#### **b) HC/MC-130 Combat Rescue Aircraft**

The ANG continues to install LAIRCM on HC/MC-130 aircraft. However, additional funding is needed to complete the fleet. To retain combat effectiveness, critical shortfalls in both tactical data link and an upgraded AN/ARS-6v12 survivor locator radio must be addressed. Additionally the Universal Aerial Refueling Receptacle Slipway (UARRSI) remains unfunded.



*HC/MC-130 Combat Rescue Aircraft*

### **ix. Other Aircraft Systems**

#### **a) Modular Airborne Firefighting System (MAFFS)**

The ANG is an active participant in the U.S. Departments of Agriculture and Interior firefighting efforts and operates MAFFS, a roll-on/roll-off platform that carries 3,000 gallons of fire retardant material. The ANG Requirements Directorate and the U.S. Forest Service are procuring eight second-generation systems dubbed “MAFFS II.” This “state-of-the-art” system will increase firefighting capability while retaining the C-130’s primary airlift mission.



*Modular Airborne Firefighting System (MAFFS)*

#### **b. Average Age of Major Items of Equipment (MIE)**

See *Table 2* for the average age of selected major items of equipment as of the end of FY 2007. Overall, the average age of aircraft within the ANG is 24 years.

#### **c. Compatibility of Current Equipment with AC**

Compatibility conflicts exist between ANG and AC equipment in the following areas.

##### **i. F-15A**

The APG-63(V)0 mechanically scanned radar suffers from low reliability, maintainability, availability, and performance.

## **ii. C-5A**

The C-5A does not have defensive systems, which severely impacts their mission capability. Also, AMP avionics modifications are funded for ANG aircraft in the FY 2008 POM. Structural modifications are essential for all ANG C-5As to avoid flight restrictions and grounding.

## **iii. C-130E/H**

The 54H60 propeller and propeller valve housing on the C-130E/H models are becoming less reliable and more costly to maintain. Additionally, they do not provide the all-around improved performance found in new commercial models. This deficiency in thrust prohibits crews from taking full advantage of cargo carrying capacity at high-density altitudes as well as affecting maneuvering capability in a threat environment.

## **iv. Commando Solo, JSTARS, MQ-1, RC-26B, Scathe View, and Senior Scout**

National agency requirements necessitate an upgrade to airborne C2ISR Communications Security (COMSEC) cryptologic communication systems.

## **d. Maintenance Issues**

### **i. C-5A**

Structural deficiencies, the contour box beam fitting (CBBF) and fuselage crown skin (CS) cracks will cost over \$500M for ANG and AFR aircraft.

### **ii. JSTARS**

JSTARS continues experiencing extreme engine repair costs and degraded performance. Re-engining JSTARS will reduce costs and improve supportability and operational performance.

### **iii. MPN-14K Radar Approach System**

With the cancellation of the MPN-26 (MACS) replacement for the AN/MPN-14K, this 1950s vintage air traffic control radar is expected to remain in the fleet until 2014. Sustainment dollars are critical and more upgrades will be essential to meet mission requirements.

## **e. Modernization Programs and Shortfalls**

### **i. F 16 and A 10 Advanced Targeting Pods (ATPs)**

The F-16 and A-10 require additional ATPs to employ precision guided weapons to fulfill the full range of taskings required by the combatant commanders. The pod must possess a fourth generation FLIR, laser spot search/track (LSS/LST), the capability for targeting J-Series weapons, and the ability to transmit video downlink.

### **ii. F-16 Commercial Fire Control Computer (CFCC)**

The CFCC is needed for F-16 Block 25/30/32 aircraft to enable future flight program upgrades. This system provides greatly improved processing power, serves as an avionics Ethernet hub/1553 bus controller, and allows for HMCS and Small Diameter Bomb (SDB) integration.

### **iii. C-5 Crown Skin and Contour Box Beam Fitting Replacement**

Modifications are required to replace crown skin and contour box beam fitting cracks caused by stress corrosion.

### **iv. C-5 Defensive Systems**

AAR-47(V2+) Missile Warning Systems (MWS) and ALE-47 Countermeasures Dispensing Systems (CMDS) to detect and counter IR missiles are needed for the C-5s.

### **v. LAIRCM for C-130, C-5, and C-17**

LAIRCM automatically detects, provides warning, and counters IR missiles using laser-based technology. It fully protects a wide range of mobility aircraft. ANG C-130Js are expected to install LAIRCM in a future Block upgrade.



*LAIRCM for C-130,  
C-5, C-17*

### **vi. RC-26 Avionics Upgrade**

RC-26 avionics suite upgrades are required to address international communications and navigations requirements changes. Both the wet film and digital still cameras have been removed from service due to support issues. A new digital imaging system is required to ensure the aircraft remains a viable platform for U.S. counter-drug missions as well as GWOT missions abroad.

### **vii. C-130 AN/APN-241 Radars**

The APN-59 radar installed on C-130 aircraft suffers from deteriorating reliability, maintainability, and availability factors. The AN/APN-241 low power, color radar (LPCR) provides enhanced capability for all-weather, precision airdrop, and detection of wind shear.

### **viii. A-10 AAR-47 Missile Approach Warning System**

The AAR-47 provides improved A-10 defensive capability against man-portable surface-to-air missiles.

### **ix. HH-60 Color Displays/SADL**

The Color Multi-Function Display System—provides a color display of current FLIR picture and integrates a digital moving map. The additional on-board processing power will enable future modifications such as SADL, LARS V12 and intelligence broadcast receiver (IBR) threat data.

### **x. Helmet-Mounted Cueing Systems (HMCS)**

The F-15, A-10, and F-16 need a HMCS to vastly improve employment of air-to-air and air-to-ground weapons by fusing sensors, displays, and employment cue information to the pilot.

### **xi. Tactical Data-Links (KC-135, HH-60, HC/MC-130)**

Tactical data links are needed to connect to the tactical nets of air and ground forces, improve target identification, reduce fratricide, and ensure situation awareness in a joint operational environment.

## **xii. F-15 Embedded Global Positioning System/Internal Navigation System (EGI)**

The EGI provides Global Positioning System (GPS) for the ANG F-15 fleet. Congress has mandated that DoD cannot obligate funds to modify or procure any aircraft that are not equipped with a GPS.

## **xiii. Engines**

The JSTARS, F-15, A-10, and F-16 models need engines upgraded or replaced to reduce the cost of sustaining legacy engines, boost performance and thrust, and improve the operational capabilities of the platforms to meet operational requirements. New engines will improve combat readiness, aircrew safety, and reduce the risks to aircrew in combat operations.

## **xiv. SENIOR SCOUT (SS)**

Due to its cryptologic mission, SS requires a full mission crew trainer system that is Distributed Mission Operation (DMO) compliant, comparable to the RC-135 Rivet Joint mission crew trainer at Offutt AFB, NE.

## **xv. F-15 AESA Radar**

The Active Electronically Scanned Array (AESA) radar detects, tracks, and communicates in multiple directions simultaneously. AESA radar for ANG F-15s is critical against asymmetric threats.

## **xvi. F-15 Advanced Radar Warning Receiver (RWR)**

The current F-15C/D RWR has had significantly degraded performance against present and future radar systems, obsolescence and diminished manufacturing sources. The F-15 RWR upgrade effort will develop, produce, test, and field a RWR replacement with current digital receiver technology.

## **f. Overall Equipment Readiness**

### **i. Aircraft**

The lack of precision engagement capability, re-engining, and improved defensive systems drive modernization of legacy aircraft to be our number one priority. Ensuring these capabilities support combatant commander requirements for emerging missions is critical.

### **ii. Other Equipment**

Mission equipment for the CONUS air defense system will become unsupportable by FY 2009. Additionally, ANG air traffic control and approach control equipment and facilities are generations behind the AC, causing logistics support to be time consuming and overly expensive.

It's imperative that every governor has each of these "Essential 10" capabilities: a Joint Force Headquarters for command and control; a Civil Support Team for chemical, biological, and radiological detection; engineering assets; communications; ground transportation; aviation; medical capability; security forces; logistics and maintenance capability. The "Essential 10" capabilities ensure that the governors are well equipped to handle future domestic operations.

## **g. Other Equipment Specific Issues**

### **i. New Missions**

- a) Command and Control, and Intelligence, Surveillance, and Reconnaissance (C2 & ISR)

Growth of AOCs, Predator, TACPs, and AF DCGS to answer dynamic Information Age threats will require aggressive resourcing support to ensure the ANG is postured correctly in partnership with the AC.

- b) Information Operations (IO)

Eight states are in the process of standing up or have IO active units. Because of the breadth and depth of this unique and dynamic mission area, ANG units activated to support IO requirements will require extensive, state-of-the-art computer, networking and telecommunications systems and equipment and associated training.

### **ii. Electronic Warfare (EW)**

Electronic Warfare includes activities in integrated EW systems, new radar warning receivers (RWR), sustainment of proven equipment, and infrared countermeasures (IRCM).



*ALQ-213 CMS*

Integrated EW Systems: The ALQ-213 Countermeasures Management systems (CMS) installed on the F-16 and A-10 manages the aircraft's entire EW suite. In addition, the ALQ-213 reduces pilot workload while increasing aircraft survivability. The next spiral upgrades include a new processor, more robust communication with the electronic attack pods, and hosting of a rangeless electronic warfare training capability.

New RWRs: The Advanced Tactical Targeting Technology (AT3) module installed in the ALR-69A provides highly accurate target information to networked aircraft against radiating threats. AT3 will be tested and demonstrated on ANG F-16 Block 30s at the ANG/AFR Test Center (AATC) in Tucson, AZ. Additionally, the ANG leads an AF initiative to replace ALR-56C RWRs with an advanced digital receiver having a minimum capability of the AT3 and fully functional with AESA radar. This receiver will be fully integrated with future F-15 C/D/E.

Sustainment of Proven Electronic Warfare Equipment: Aircraft survivability depends on AF-managed EW equipment including electronic attack systems, ALQ-213, ALR-69, ALR-56M, and AAR-47. The ANG is leading the way with modernization efforts that include processor upgrades, unsupportable parts replacement and continued software upgrades.

IRCM Systems: IRCM has an increased priority for both combat and mobility forces. Combat aircraft efforts include missile-warning systems such as the ANG led initiative that installed the AAR-47 on the A-10 as well as special material IRCM on the ANG F-15s. Mobility aircraft efforts include AAR-47 MWS and laser-based IRCM systems as well as an ANG led initiative to provide an operational IRCM to test missile warning systems.

### iii. Distributed Mission Operations (DMO) and Simulation



*Distributed  
Warfare  
Detachment, Iowa  
ANG*

The ANG established the first Distributed Warfare Detachment in the AF at the 132<sup>nd</sup> Fighter Wing to house the Distributed Training Operations Center (DTOC). As the Guard's DMO lynchpin, the DTOC provides an operational environment for a virtual battlespace, linking a wide array of high fidelity flight and mission crew simulators. The DTOC is responsible for all network management, event control, scenario development, unit DMO scheduling, remote maintenance, remote instruction, and realistic threat insertion. In addition, the DTOC manages the distributed network called ARCNet. The Mission Training Engineering Center (MTEC) in Mesa, AZ coordinates technology programs with AFRL, and acts as the engineering focal point to exploit and transition leading edge technology into hardware or software solutions. The ANG has spearheaded a number of leading edge technology programs. The F-16 Block 30 Full Combat Mission Trainer (FCMT) program will replace several older systems with initial deployment to Regional Mission Training Centers followed by limited unit-level deployment. The Boom Operator Simulation System (BOSS) a high fidelity, low cost, squadron-level KC-135 simulator begins prototype integration FY 2008 with an eventual requirement for 17 devices. The Multi-Mission Crew Trainer (MMCT) program will support four uniquely Guard ISR weapon systems developed to take advantage of economies of scale; shared technology solutions, single program management; and parallel spiral improvements. Development begins in spring 2008. In FY 2008, ANG Ranges and CTRCs will be networked with the DTOC for a robust instrumented range complex.

#### **B. Changes Since Last NGRER**

Although equipping philosophy for the ANG is unchanged, major mission and programmatic changes are underway. In support of a Total Force modernizing approach, the ANG has an ongoing, aggressive effort to equip A-10s and F-16s with LITENING AT Block 1 and Sniper XR Advanced Targeting Pods. The ANG requirement of 193 pods is 80 percent complete. Currently 24 LITENING AT pods have been upgraded to LITENING Video Data Link Pods (VDL) with 28 more to modify. The F-16 FCMT program received \$11M in FY 2006 via Congressional action for installation of a 4-ship regional training facility at Burlington, VT. Congress added \$52.2M funding in FY 2006 for 6 ANG F-15C/D AESA systems and an additional \$72M in FY 2007 for 8 ANG F-15C/D AESA systems. The current minimum requirement of AESA systems is 48 for the ANG.

The ANG continues to expand its role in Space and Information Operations Warfare as evidenced by ANG working with the AF to integrate and stand up Predator units within the FYDP with potential for more outside the FYDP.

#### **C. Future Years Programs (FY 2009–FY 2011)**

##### **1. FY 2011 Equipment Requirements**

The ANG fleet expects continued modernization in FY 2008 and beyond. Refer to details in each previous individual section for modernization. Enhancements include digital video recorders, the Joint Helmet Mounted Cueing System (JHMCS), ALR-69A/AT3 (Advanced Tactical Targeting Technology), advanced Distributed Mission Training (DMT) simulators, engines, data links,

APN-241 radar, LAIRCM, and structural modifications; all of which will remain issues as aircraft fly beyond their designed service life.

## **2. Anticipated New Equipment Procurements**

Funding for procurement of ANG combat and direct combat support equipment is programmed by the AC as required by planned total force employment plans. Congress, in their annual budget appropriation, may also direct additional ANG equipment procurements through NAREA. The ANG has 128 LITENING AT and 27 Sniper XR targeting pods in service. Additional ATPs for the F-16 and A-10 are required. In concert with the AC, procurement of ATPs will complete the 193 pod requirement. Additional unfunded modernization programs include the CFCC, ARC-210 radios, Advanced IFF, improved engines, and HMCS.

## **3. Anticipated Transfers from AC to RC**

The F-15C/D transfers will continue from the AC to the ANG combat-coded squadrons until FY 2013. Additional KC-135R models will transfer to replace retired D/E aircraft. C-5As from the AC are transferring to the 164<sup>th</sup> AW, Memphis, TN and the 167<sup>th</sup> AW, Martinsburg, WV in FY 2008.

## **4. Anticipated Withdrawals from RC Inventory**

Currently, the AF has programmed 183 F-22s through Congress. Deliveries are scheduled through FY 2012. ANG F-15 modernization and retirement is a fluid process affected by BRAC execution. As newer C-130Js are acquired, older C-130E/Hs will be retired. Older KC-135D/E models are retired and KC-135Rs are transferring from the AC.

## **5. Remaining Equipment Shortages and Modernization Shortfalls at the End of FY 2011**

The most significant challenge to ANG readiness is keeping equipment modernized and relevant. The ANG has the oldest aircraft in the AF inventory. Modernization of the fleet to attain capabilities equivalent to newer platforms and meet the war-fighting combatant commanders' tasking is critical to a robust and lethal AF.

- ANG "Essential 10" Priority 1 equipment.
- Joint Helmet Mounted Cueing System (JHMCS) is needed for F-15, F-16, and A-10 aircraft to achieve first look, first shot advantage in the air-to-air, within visual range arena, and air-to-ground employment.
- An F-15 digital video recorder is required to completely capture training mission data.
- ANG F-15 aircraft require continued procurement of PW-220E engine kits. After BRAC 2005, shortfalls of 180 engine upgrade kits are required.
- The PRC-112G personnel recovery radio replaces the PRC-90 radio, which will be unsustainable in FY 2009. 2135 radios are required to maintain this critical element of search and rescue capability.
- To support Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements and the integration of NVGs, C-130s need a fully redesigned avionics package and a NVIS compatible cockpit.

- The Combat Readiness Training Centers and Ranges must be equipped with Link-16 and EPLRS capable data links to provide relevant training networks.
- The TF-33 engines on JSTARS aircraft are subject to increased repair costs, diminished performance, and attendant operating restrictions that impact aircraft effectiveness.
- Four C-37 (Gulfstream V) aircraft are required at the 201<sup>st</sup> Airlift Squadron, Andrews AFB, MD to replace the aging C-38 fleet. These aircraft support Congressional, Executive Branch, DoD, AF, and ANG travel missions worldwide.
- Due to the age of the AN/MPN-14K radar there are no spares remaining to maintain the equipment. Efforts to implement a replacement program have not been fully successful.

## **6. Other Comments**

NGREA funds play a major role in the equipment modernization program within the ANG. Small amounts of discretionary NGREA funds provide the catalyst for significant enhancements in combat capability. Innovative equipment modernization and associated business practices utilizing NGREA seed low-cost, high payoff programs that benefit the ANG, as well as the AC and AFR. Equipment modernization is essential to provide the very best equipment to our citizen Airmen and Soldiers as they defend this Nation against our adversaries. With modernization, we are able to quickly field the 80 percent solution at 20 percent of the cost.

## **D. Summary**

The ANG will continue to adapt to meet combatant commander and Aerospace Expeditionary Force (AEF) requirements for combat and combat support forces. The ANG is currently fighting in Afghanistan and Iraq and is ready to take the fight anywhere in support of national military strategy. We are ready to respond to any short-notice tasking with fully combat-trained professionals equipped with aging, but capable weapons systems.

## Consolidated Major Item Inventory and Requirements

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
<b>AIR REFUELING</b>							
AIR REFUELING, KC-135R	KC-135R	\$57,700,000	152	154	154	163	156
AIR REFUELING, KC-135T	KC-135T	\$54,000,000	16	16	16	16	16
<b>AIRLIFT</b>							
AIRLIFT, C-130E	C-130E	\$12,400,000	17	14	6	0	0
AIRLIFT, C-130H	C-130H	\$29,200,000	126	126	126	126	125
AIRLIFT, C-130J	C-130J	\$64,000,000	24	22	22	16	16
AIRLIFT, C-17A	C-17A	\$219,200,000	8	9	9	9	8
AIRLIFT, C-5A	C-5A	\$119,300,000	32	32	32	32	30
AIRLIFT, C-5B	C-5B	\$156,800,000	1	1	1	1	1
AIRLIFT, LC-130H <sup>1</sup>	LC-130H	\$71,000,000	10	10	10	10	10
<b>ELECTRONIC WARFARE</b>							
EW, E-8C	E-8C/AOT	\$251,500,000	18	18	18	18	14
EW, EC-130E	EC-130E	\$28,000,000	2	2	2	2	2
EW, EC-130J	EC-130J	\$90,000,000	7	7	7	7	4
EW, RC-26B	RC-26B	\$1,500,000	11	11	11	11	11
<b>FIGHTER</b>							
FIGHTER, A/OA-10A	A/OA-10A	\$10,700,000	99	88	87	87	78
FIGHTER, F-15A	F-15A	\$29,000,000	21	6	0	0	0
FIGHTER, F-15B	F-15B	\$29,000,000	1	0	0	0	0
FIGHTER, F-15C	F-15C	\$31,000,000	79	95	107	93	80
FIGHTER, F-15D	F-15D	\$31,000,000	6	7	9	9	7
FIGHTER, F-16C	F-16C	\$19,500,000	337	312	314	313	274
FIGHTER, F-16D	F-16D	\$19,500,000	16	16	17	17	2
FIGHTER, F-22A	F-22A	\$185,000,000	0	0	17	17	17
<b>OPERATIONAL SUPPORT</b>							
OP SUPPORT, C-21A	C-21A	\$3,100,000	18	18	18	18	18
OP SUPPORT, C-32B	C-32B	\$91,000,000	2	2	2	2	0
OP SUPPORT, C-38A	C-38A	\$12,000,000	2	2	2	2	2
OP SUPPORT, C-40C	C-40C	\$70,000,000	3	3	3	3	3
<b>RESCUE</b>							
RESCUE, HC-130N/P	HC-130N/P	\$19,100,000	8	8	8	8	7
RESCUE, HH-60G	HH-60G	\$17,600,000	20	20	19	19	15
RESCUE, MC-130P	MC-130P	\$75,000,000	4	4	4	4	4
<b>MISCELLANEOUS EQUIPMENT</b>							
MQ-1B	MQ-1B	\$3,200,000	6	5	1	1	1
FIRE FIGHT/CRASH VEH	P-19	\$353,000	170	170	170	170	170
HMMWV, ARMORED	M1145	\$153,030	66	66	66	66	66
EMEDS	EMEDS	\$3,500,000	17	17	17	17	17
25K LOADERS	25K LDR	\$412,500	40	40	40	40	40

(1) Four LC-130s are National Science Foundation (NSF)-owned.

### Average Age of Equipment

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

Nomenclature	Equip No.	Average Age	Remarks
<b>AIR REFUELING</b>			
AIR REFUELING, KC-135R	KC-135R	46	
AIR REFUELING, KC-135T	KC-135T	48	
<b>AIRLIFT</b>			
AIRLIFT, C-130E	C-130E	44	
AIRLIFT, C-130H	C-130H	19	
AIRLIFT, C-130J	C-130J	6	
AIRLIFT, C-17A	C-17A	4	
AIRLIFT, C-5A	C-5A	39	
AIRLIFT, LC-130H	LC-130H	16	
<b>ELECTRONIC WARFARE</b>			
EW, E-8C	E-8C	7	
EW, EC-130E	EC-130E	44	
EW, EC-130J	EC-130J	7	
EW, RC-26B	RC-26B	15	
<b>FIGHTER</b>			
FIGHTER, A/OA-10A	A/OA-10A	27	
FIGHTER, F-15A	F-15A	29	
FIGHTER, F-15C	F-15C	26	
FIGHTER, F-15D	F-15D	27	
FIGHTER, F-16C	F-16C	20	
FIGHTER, F-16D	F-16D	18	
<b>OPERATIONAL SUPPORT</b>			
OP SUPPORT, C-21A	C-21A	20	
OP SUPPORT, C-32B	C-32B	4	
OP SUPPORT, C-38A	C-38A	10	
OP SUPPORT, C-40C	C-40C	4	
<b>RESCUE</b>			
RESCUE, HC-130N	HC-130N	14	
RESCUE, HC-130P	HC-130P	41	
RESCUE, HH-60G	HH-60G	17	
RESCUE, MC-130P	MC-130P	41	

### Service Procurement Program - Reserve (P-1R)

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

Nomenclature	FY 2009	FY 2010	FY 2011
<b>MODIFICATION OF INSERVICE AIRCRAFT</b>			
A-10	43,310,000	91,083,000	81,763,000
F-15	3,522,000	32,839,000	71,414,000
F-16	88,814,000	79,013,000	65,165,000
C-5	163,533,000	272,312,000	303,459,000
C-17A	15,284,000	22,620,000	21,688,000
C-130	133,863,000	156,496,000	149,326,000
C-130J MODS	17,455,000	32,755,000	33,926,000
C-135	53,595,000	56,726,000	14,064,000
E-8	30,657,000	229,287,000	210,219,000
<b>AIRCRAFT SUPPORT EQUIPMENT &amp; FACILITIES</b>			
OTHER PRODUCTION CHARGES	521,357,000	901,475,000	1,239,017,000
<b>VEHICULAR EQUIPMENT</b>			
PASSENGER CARRYING VEHICLES	2,491,000	2,598,000	2,650,000
MEDIUM TACTICAL VEHICLE	2,761,000	2,904,000	2,939,000
SECURITY AND TACTICAL VEHICLES	1,561,000	1,664,000	1,687,000
RUNWAY SNOW REMOVAL & CLEANING EQUIP	2,328,000	8,884,000	8,787,000
ITEMS LESS THAN \$5,000,000 (VEHICLES)	3,080,000	15,961,000	15,446,000
<b>ELECTRONICS &amp; TELECOMMUNICATIONS EQUIPMENT</b>			
NATIONAL AIRSPACE SYSTEM	756,000		6,028,000
THEATER AIR CONTROL SYS IMPROVEMENT	22,263,000	38,433,000	45,005,000
WEATHER OBSERVATION FORECAST	1,146,000		
AF GLOBAL COMMAND & CONTROL SYSTEM	775,000	758,000	798,000
COMBAT TRAINING RANGES		901,000	7,362,000
THEATER BATTLE MGT C2 SYSTEM	1,892,000	3,972,000	3,135,000
AIR & SPACE OPERATIONS CTR-WPN SYSTEM	3,961,000		3,970,000
BASE INFO INFRASTRUCTURE	10,115,000	10,427,000	10,010,000
TACTICAL C-E EQUIPMENT	81,497,000	57,082,000	73,343,000
CCTV/AUDIOVISUAL EQUIPMENT	96,000	122,000	107,000
<b>OTHER BASE MAINTENANCE AND SUPPORT EQUIPMENT</b>			
NIGHT VISION GOGGLES	1,062,000		
MECHANIZED MATERIAL HANDLING EQUIPMENT	4,207,000	4,465,000	4,530,000
BASE PROCURED EQUIPMENT	1,550,000	1,633,000	1,662,000
ITEMS LESS THAN \$5,000,000 (BASE SUPPORT)	1,239,000	1,611,000	1,464,000
<b>TOTAL</b>	<b>\$1,214,170,000</b>	<b>\$2,026,021,000</b>	<b>\$2,378,964,000</b>

## National Guard and Reserve Equipment Appropriation (NGREA) Procurements

*NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.*

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
<b><u>FY 2006 TITLE III NGREA EQUIPMENT</u></b>				
<b>PRECISION STRIKE</b>				
F-16/A-10 HELMET MOUNTED CUEING SYSTEM	3,000,000			
F-16/A-10 TARGETING POD ENHANCEMENTS	500,000			
F-16 AVIONICS ENHANCEMENT	800,000			
<b>DATA LINK/COMBAT ID</b>				
A-10/KC-135 BEYOND LINE OF SIGHT (BLOS) RADIOS	4,750,000			
A-10/HH-60/HC-130 SITUATIONAL AWARENESS DATALINK	2,740,000			
C-130/KC-135 COCKPIT DISPLAYS	1,907,000			
KC-135 ANTENNAS	1,000,000			
TAC-P TERMINAL ATTACK CONTROLLER KIT	500,000			
<b>ENHANCED SURVIVABILITY</b>				
A-10/F-16 DEFENSIVE SYSTEMS UPGRADE	2,050,000			
A-10/HH-60/HC-130 SURVIVAL RADIOS	292,000			
C-130 CHAFF/FLARE DISPENSER SWITCHES	495,000			
HH-60/A-10 DISPLAYS	2,500,000			
HH-60 GUNNER SEATS	1,260,000			
JSTARS TRAFFIC ALERT & COLLISION AVOIDANCE SYS	1,180,000			
PARARESCUE (PJ) / SPECIAL TACTICS (ST) / COMBAT RESCUE OFFICER (CRO) OXYGEN SYSTEM	320,000			
<b>PROPULSION MODERNIZATION</b>				
F-15 220E ENGINE KIT	300,000			
<b>SIMULATION SYSTEMS</b>				
F-16 MISSION TRAINING SYSTEM	1,000,000			
<b>24-HOUR OPERATIONS</b>				
C-130/KC-135 AUTOMATED AIRCREW EQUIP KITS	1,424,000			
<b>TRAINING</b>				
C-130 VIRTUAL ELECTRONIC CBT TRAINING SYS (VECTS)	2,260,000			
VULNERABILITY ASSESSMENT AGGRESSOR OPS	850,000			
DIGITAL NETWORK TARGET RANGE	470,000			
<b><u>FY 2006 TITLE IX NGREA EQUIPMENT</u></b>				
<b>RESCUE AND SECURITY POLICE EQUIPMENT</b>				
DURABLE INFLATABLE BOAT PACKAGES	505,875			
RESCUE EQUIPMENT PACKAGES	239,040			
UNIT AUTONOMOUS OPERATIONS KIT	166,800			
SECURITY FORCES DEPLOYED EQUIP PACKAGES	736,400			
SPECIALIZED CSAR RUCKS	25,000			
BASE SHELTERS	500,000			
IRIDIUM PHONES	87,720			
SHORING KITS	224,000			
GROUND CONTROL FLYAWAY SYSTEMS	60,000			
PRC-117 RADIOS	1,935,856			
RESCUE DEPLOYED EQUIPMENT PACKAGES	14,900,000			

## National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
AIRFIELD LIGHTING KITS	35,000			
SURVEYORS EQUIPMENT (LANDING SITES)	105,000			
PROWLER VEHICLES FOR OPERATIONS	75,000			
FIELD RADIO & TELEPHONE EQUIPMENT PACKAGES	2,241,039			
<b>AEROMEDICAL EQUIPMENT</b>				
EXPEDITIONARY MEDICAL SUPPORT KIT	2,000,000			
SPEAR MEDICAL KITS	700,000			
INMARSAT RADIOS	4,110,000			
800 MHZ RADIOS	2,000,000			
C2 NETWORK NODES	548,000			
HIGH MOBILITY MULTI-PURP WHEELED VEH (HMMWV)	1,000,000			
LIGHT MEDIUM TACTICAL VEHICLES (LMTV)	4,400,000			
AIR CONDITIONING UNITS (REMOTE OPERATIONS)	400,000			
PORTABLE SECURE FM RADIOS (REMOTE OPERATIONS)	312,000			
EMERGENCY MOBILE MEDICAL TREATMENT FACILITY	8,000,000			
<b>CIVIL ENGINEERING</b>				
EXCAVATORS	3,463,800			
CRAWLER TRACTORS	2,589,600			
LOADERS	4,726,500			
GRADERS	2,543,436			
CRANES	2,340,000			
DUMP TRUCKS	4,350,000			
REO/RTS SUPPORT FACILITY (MOBILE)	10,000,000			
P-19 FIREFIGHTING VEHICLES & ENHANCEMENTS	6,345,000			
P-10 FIREFIGHTING VEHICLES	224,000			
P-18 FIREFIGHTING VEHICLES	289,000			
RED HORSE GENERATORS & SUPPORT EQUIPMENT	5,000,000			
<b>LOGISTICS AND SERVICES SUPPORT</b>				
VEHICLE SUPPORT - UTILITY TRUCKS	1,100,000			
150-PERSON BASIC EXPEDITIONARY AIRFIELD RESOURCES (BEAR) KITS	11,300,000			
550-PERSON BEAR KITS	23,000,000			
RADIOS/SATELLITE PHONES	100,000			
SINGLE PALLET EXPEDITIONARY KITCHENS (SPEK)	5,000,000			
<b>COMMAND AND CONTROL</b>				
NATIONWIDE NETWORK MODERNIZATION	32,500,000			
ROVER DATA LINK TRANSMITTERS	3,500,000			
MRC-144 MOBILE RADIOS	321,200			
<b>AIRCRAFT EQUIPMENT</b>				
C-130 SCATHE VIEW ISR PLATFORM IMPROVEMENTS	8,900,000			
RC-26 AIRCRAFT EQUIPMENT	17,800,000			
C-130 APN-241 RADAR	800,000			
TARGETING POD	1,400,000			
HH-60 COLOR DISPLAYS	2,000,000			
LIGHTWEIGHT AIRBORNE RADIO SYSTEM (LARS)	2,500,000			
<b>FUNCTIONAL AREA SUPPORT</b>				
NIGHT VISION GOGGLES	1,000,000			
SAFETY EQUIPMENT - ALL TERRAIN UTILITY VEHICLES	200,000			

## National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
NIGHT VISION GOGGLES	1,200,000			
<b><u>FY 2007 TITLE III NGREA EQUIPMENT</u></b>				
<b>PRECISION STRIKE</b>				
F-16/A-10 HELMET MOUNTED CUEING SYSTEM		3,900,000		
F-16/A-10 TARGETING POD ENHANCEMENTS		5,000,000		
F-16 AVIONICS ENHANCEMENT		1,000,000		
A-10/F-16 ALL WEATHER PRECISION STRIKE CAPABILITY		2,000,000		
<b>DATA LINK/COMBAT ID</b>				
A-10/KC-135 BLOS RADIOS		8,000,000		
RC-26 MSO STATION UPGRADES		825,000		
A-10/HH-60/HC-130 SITUATIONAL AWARENESS DATALINK		4,750,000		
A-10/HH-60/HC-130 LARS V-12		2,200,000		
JSTARS GLOBAL CNS/ATM		1,000,000		
<b>ENHANCED SURVIVABILITY</b>				
A-10/F-16 DEFENSIVE SYSTEMS UPGRADE		500,000		
ALE-47 OPERATIONAL TESTER		1,500,000		
C-130 CHAFF/FLARE DISPENSER SWITCHES		1,500,000		
C-130 LAIRCM		750,000		
C-5 DEFENSIVE SYSTEMS		5,000,000		
HH-60/A-10 DISPLAYS		1,750,000		
KC-135 SITUATIONAL COCKPIT DISPLAYS		600,000		
C-130 ACTIVE NOISE REDUCTION		500,000		
F-16/A-10 ALQ-213 APU CONTINUATION AND FLARE		750,000		
SECURITY FORCES OPERATIONAL EQUIPMENT		2,000,000		
PJ/ST/CRO HIGH ALTITUDE EQUIPMENT		1,220,000		
HH-60 WEAPONS MODERNIZATION AND CSAR BOARD		2,250,000		
<b>PROPULSION MODERNIZATION</b>				
C-130/F-16 PROPULSION SYSTEM UPGRADES		2,500,000		
<b>SIMULATION SYSTEMS</b>				
MWS BENCH TESTER		600,000		
MANPAD SIMULATOR		680,000		
C-130/F-16/A-10/HH-60 VECTS		1,250,000		
BOSS BOOM OPERATOR TRAINER		800,000		
MULTI-MISSION CREW TRAINER		500,000		
F-16/A-10/PREDATOR DMO/DTS ENHANCEMENTS		1,000,000		
<b>24-HOUR OPERATIONS</b>				
C-130 APN 241		3,660,000		
KC-135 NVG COMPATIBLE LIGHTING		500,000		
MOBILE APPROACH CONTROL SYSTEM (MCAS)		2,000,000		
MC-130 FLIR		1,600,000		
<b>COMMAND AND CONTROL</b>				
TERMINAL ATTACK CONTROLLER (TAC) KIT		2,086,000		
I-FACT DISTRIBUTED MISSION OPERATIONS		666,000		
AOC DMO CAPABILITY		200,000		
ACS AIR SURVEILLANCE AND AIR CONTROL (ASAC)		500,000		
<b>INTELLIGENCE, SURVEILLANCE, RECON (ISR)</b>				
PREDATOR OPERATIONS EQUIPMENT MOD & INTEGRATION		3,000,000		
DCGS COLLATERAL ENCLAVE & COMM SUPPORT MOD		3,411,000		

## National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
SENIOR SCOUT SITUATIONAL AWARENESS KIT		1,750,000		
<b>INFORMATION OPERATIONS (IO)</b>				
NETWORK WARFARE TEST & TRAINING RANGE		594,000		
NETWORK WARFARE LEARNING MANAGEMENT SYSTEM		407,000		
<b><u>FY 2008 TITLE III NGREA EQUIPMENT</u></b>				
<b>MEDICAL</b>				
EXPEDITIONARY MEDICAL SUPPORT (EMEDS)			7,600,000	
EXPEDITIONARY DEPLOYMENT O2 CONC SYS (EDOCS)			1,800,000	
MATERIALS HANDLING AND STORAGE EQUIPMENT			600,000	
<b>COMMUNICATIONS</b>				
DEPLOYABLE WIRELESS CAPABILITY			4,000,000	
C2/TACP SADL KITS			444,000	
<b>LOGISTICS</b>				
COMBAT READINESS TRAINING CENTER EQUIPMENT			2,000,000	
HLS/HLD MISSION ESSENTIAL EQUIPMENT			1,000,000	
<b>TRANSPORTATION</b>				
HMMWV XM1145			9,156,000	
<b>ENGINEER</b>				
P-19, P-22, P-23 FIREFIGHTING VEHICLES			5,800,000	
HAZARDOUS MATERIAL EQUIPMENT			1,500,000	
FIRE FIGHTERS SELF CONTAINED BREATHING APPARATUS			2,000,000	
EXPLOSIVE ORDNANCE DISPOSAL (EOD) IED EQUIPMENT			2,000,000	
<b>CIVIL SUPPORT TEAMS (FORCE PROTECTION)</b>				
PJ/STS MEDICAL TREATMENT EQUIPMENT			2,500,000	
<b>MAINTENANCE</b>				
RADIO FREQUENCY IDENTIFICATION			400,000	
<b>SECURITY</b>				
SECURITY FORCES NIGHT VISION AN/PVS-14			5,000,000	
SECURITY FORCES BODY ARMOR ENSEMBLE			2,400,000	
SECURITY FORCES WEAPONS & TRAINING UPGRADES			2,600,000	
<b>AVIATION</b>				
F-15 VERY HIGH SPEED INTEGRATED CIRCUITRY CENTRAL COMPUTER			3,000,000	
F-16 ADVANCED INTERROGATOR FRIEND/FOE			4,800,000	
HC-130 TACTICAL DATA LINK			1,200,000	
PJ SITUATIONAL AWARENESS SUITE			1,600,000	
HC/MC-130 ENHANCED AIRBORNE MISSION COMMANDER			1,200,000	
C-130 COCKPIT DISPLAY UNITS			3,300,000	
C-21 REDUCED VERTICAL SEPARATION MINIMUM			3,200,000	
C-130 APN-241 RADAR			1,000,000	
C-130 PROPULSION IMPROVEMENTS			1,500,000	
C-130 RADARS			1,000,000	
MODULAR AIRBORNE FIRE FIGHTING SYSTEMS VHF/FM RADIO			2,000,000	
<b>PRECISION STRIKE</b>				
F-15/F-16/A-10 HELMET MOUNTED CUEING SYSTEM			7,000,000	
F-16 AVIONICS UPGRADES & ADVANCED MISSION EXTENDERS			6,200,000	
F-16/A-10 ADVANCED TARGETING POD/THUNDER POD			10,500,000	
F-16/A-10 TARGETING POD VIDEO DOWNLINK			2,000,000	
F-16/A-10 TARGETING POD MODIFICATIONS			3,000,000	

### National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks
<b>DATA LINK/COMBAT IDENTIFICATION</b>				
F-16/A-10 BEYOND LINE-OF-SITE RADIOS			3,900,000	
C-130/KC-135 TACTICAL DATA LINK			5,500,000	
KC-135 COCKPIT DISPLAY UNIT			1,500,000	
<b>24 HOUR OPERATIONS</b>				
JSTARS 8.33 RADIOS			2,200,000	
F-15/F-16 DIGITAL VIDEO RECORDER			1,000,000	
C2/TACP UP-ARMORED HMMWV			414,000	
<b>ENHANCED SURVIVABILITY</b>				
C-5A DEFENSIVE SYSTEMS			3,900,000	
PJ/ST SPECIAL TACTICS SUITE			1,700,000	
C-130/C-5/C-17 ENHANCED LOOKOUT CAPABILITY			2,600,000	
HH-60,HC/MC-130,A-10 LIGHTWEIGHT AIRBORNE RADIO SYSTEM (LARS)			2,750,000	
HH-60 DEFENSIVE ARMAMENT UPGRADE			1,000,000	
KC-135/C-5/C-130 COUNTERMEASURES			500,000	
C-130 CRASHWORTHY LOADMASTER SEATS			3,000,000	
<b>PROPULSION MODERNIZATION</b>				
F-16 PROPULSION SYSTEM UPGRADES			5,100,000	
<b>SIMULATION SYSTEMS</b>				
F-16 FULL COMBAT MISSION TRAINER			250,000	
A-10 FULL MISSION TRAINER			400,000	
KC-135 BOOM OPERATOR SIMULATOR			800,000	
<b>INTELLIGENCE, SURVEILLANCE, RECONNAISSANCE (ISR)</b>				
PREDATOR OPERATIONS EQUIP MODERNIZATION & INTEGRATION			3,000,000	
DCGS COLLATERAL ENCLAVE & COMM SUPPORT MODERNIZATION			3,072,000	
SENIOR SCOUT SITUATIONAL AWARENESS			3,100,000	
<b>TOTAL</b>	<b>\$229,397,266</b>	<b>\$74,699,000</b>	<b>\$148,986,000</b>	

### Projected Equipment Transfer/Withdrawal Quantities

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the AC receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty	Remarks
<b>AIR REFUELING</b>					
AIR REFUELING, KC-135R	KC-135R	+2		+9	
<b>AIRLIFT</b>					
AIRLIFT, C-130E	C-130E	-3	-8	-6	
AIRLIFT, C-130J	C-130J	-2		-6	
AIRLIFT, C-17A	C-17A	+1			
<b>ELECTRONIC WARFARE</b>					
EW, EC-130J	EC-130J				
<b>FIGHTER</b>					
FIGHTER, A/OA-10A	A/OA-10A	-11	-1		
FIGHTER, F-15A	F-15A	-15	-6		
FIGHTER, F-15B	F-15B	-1			
FIGHTER, F-15C	F-15C	+16	+12	-14	
FIGHTER, F-15D	F-15D	+1	+2		
FIGHTER, F-16C	F-16C	-25	+2	-1	
FIGHTER, F-16D	F-16D		+1		
FIGHTER, F-22A	F-22A			+17	
<b>RESCUE</b>					
RESCUE, HH-60G	HH-60G		-1		
<b>MISCELLANEOUS EQUIPMENT</b>					
MQ-1B	MQ-1B	-1	-4		

### FY 2005 Planned vs Actual Procurements and Transfers

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGREA columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$)		FY 2005 NGREA (\$)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b><u>FY 2005 PLANNED TRANSFERS &amp; WITHDRAWALS</u></b>							
OPS SPT, C-22B	C-022B	-1	-1				
EL WARFARE, E-8C	E-008C	+1	+1				
FIGHTER, F-15C	F-015C	+1	+24				
FIGHTER, F-16A	F-16A	+2	+1				
FIGHTER, F-16C	F-016C	+4	+1				
AIRLIFT, C-130E	C-130E	-7	-17				
AIRLIFT, C-130J	C-130J	+3	0				
AIRLIFT, C-141C	C-141C	-15	-15				
<b><u>FY 2005 P-1R EQUIPMENT</u></b>							
<b>MODIFICATION OF INSERVICE AIRCRAFT</b>							
A-10				14,941,000	14,182,000		
F-15				970,000	4,695,000		
F-16				55,500,000	99,618,000		
C-5				9,867,000	11,643,000		
C-130				30,590,000	33,110,000		
C-130J MODS				18,460,000	12,785,000		
C-135				22,838,000	22,123,000		
E-8				45,302,000	61,023,000		
H-60				26,200,000	19,765,000		
<b>AIRCRAFT SPARES AND REPAIR PARTS</b>							
INITIAL SPARES/REPAIR PARTS				4,000	0		
<b>AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES</b>							
COMMON SUPPORT EQUIPMENT				52,323,000	45,200,000		
OTHER PRODUCTION CHARGES				1,333,000	9,871,000		
<b>VEHICULAR EQUIPMENT</b>							
TRUCK, CARGO-UTILITY, 3/4T				9,543,000	1,659,000		
TRUCK MAINT/UTILITY/DELIVERY				3,699,000	2,028,000		
HIGH MOBILITY VEHICLE (MYP)				5,673,000	3,069,000		
CARGO & UTILITY VEHICLES - ITEMS LESS THAN \$5M				5,320,000	5,309,000		
HMMWV, ARMORED				2,304,000	462,000		
TRACTOR, A/C TOW, MB-4				3,800,000	3,798,000		
TRACTOR, TOW, FLIGHTLINE				1,992,000	765,000		
SPECIAL PURPOSE VEHICLES - ITEMS LESS THAN \$5M				6,511,000	6,506,000		
TRUCK, F/L 10,000 LB				1,273,000	704,000		
MATERIAL HANDLING EQ - ITEMS LESS THAN \$5M				2,217,000	2,216,000		
TRUCK, DUMP				3,129,000	1,525,000		
RUNWAY SNOW REMOVAL & CLEANING EQ				9,486,000	8,501,000		
BASE MAINTENANCE SUPPORT - ITEMS LESS THAN \$5M				4,117,000	3,964,000		
<b>ELECTRONICS AND TELECOMMUNICATIONS EQUIP</b>							
NATIONAL AIRSPACE SYSTEM				3,930,000	645,000		

## FY 2005 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$)		FY 2005 NGREA (\$)	
		Plan	Actual	Plan	Actual	Plan	Actual
THEATER AIR CONTROL SYS IMPRO				10,949,000	10,937,000		
AF GLOBAL COMMAND & CONTROL SYS				525,000	517,000		
COMBAT TRAINING RANGES				1,700,000	1,715,000		
GCSS-AF FOS				500,000	0		
THEATER BATTLE MGT C2 SYS				1,634,000	620,000		
DEFENSE MESSAGE SYSTEM (DMS)				1,125,000	2,508,000		
NAVSTAR GPS SPACE				1,380,000	1,381,000		
TACTICAL C-E EQUIPMENT				20,000,000	19,953,000		
BASE COMM INFRASTRUCTURE				29,107,000	29,086,000		
<b>OTHER BASE MAINTENANCE AND SUPPORT EQUIP</b>							
BASE/ALC CALIBRATION PACKAGE				616,000	609,000		
TEST EQUIPMENT - ITEMS LESS THAN \$5M				39,000	38,000		
NIGHT VISION GOGGLES				266,000	272,000		
PERSONAL SAFETY & RESCUE EQ - ITEMS LESS THAN \$5M				3,097,000	3,098,000		
MECHANIZED MATERIAL HANDLING				1,560,000	1,564,000		
DEPOT PLANT & MHE - ITEMS LESS THAN \$5M				1,957,000	1,955,000		
ELECTRICAL EQ - ITEMS LESS THAN \$5M				3,312,000	3,316,000		
PHOTOGRAPHIC EQUIPMENT				350,000	350,000		
AIR CONDITIONERS				392,000	392,000		
BASE SUPPORT EQ - ITEMS LESS THAN \$5M				6,025,000	5,845,000		
<b>FY 2005 NGREA EQUIPMENT</b>							
<b>PRECISION STRIKE</b>							
TARGETING PODS						15,000,000	1,250,000
F-15 JOINT HELMET MOUNTED CUEING SYS (HMCS)						5,000,000	5,000,000
F-16/A-10 HMCS INTEGRATION						0	2,000,000
<b>DATA LINK/COMBAT ID</b>							
F-16 COLOR DISPLAYS						6,985,300	6,985,300
F-16/A-10 ROVER DATA LINKS FOR LISTENING AT						4,200,000	4,200,000
A-10 SMART COLOR DISPLAY						4,500,000	4,500,000
KC-135 ABI/COMBAT TRACK II SYSTEMS						4,800,000	4,900,000
PRC-90 SURVIVAL RADIO						0	348,000
<b>ENHANCED SURVIVABILITY</b>							
C-130/HC-130 LARGE A/C IR COUNTERMEASURES						32,400,000	32,400,000
F-16 EPLRS ANTENNAS						5,380,000	5,380,000
TAC-P KITS						4,830,000	8,830,000
HH-60 200 GALLON FUEL TANKS						2,800,000	2,800,000
C-130J ARMOR KITS						768,000	768,000
F-15 BOL LOADERS						280,000	280,000
DTOC/DMT FUNDING						3,068,700	2,998,700
F-16 PIDSU ENHANCED WPN PYLONS W/SPT EQ						1,800,000	9,200,000
F-16 ALQ 131 1553 DATA BUS CARDS						1,100,000	0
<b>24-HOUR OPERATIONS</b>							
NIGHT VISION GOGGLES						1,000,000	1,000,000
ENHANCED NIGHT VISION GOGGLES						720,000	720,000
CLASSIFIED PROGRAM						0	5,000,000
<b>TOTAL</b>				<b>\$425,856,000</b>	<b>\$459,322,000</b>	<b>\$94,632,000</b>	<b>\$98,560,000</b>

**Major Item of Equipment Substitution List**

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No

**Service Does Not Use Substitution To Satisfy Major Item Equipment Requirements**

### Significant Major Item Shortages

*NOTE: This table provides a RC top 10 prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	HC-130/MC-130 Enhanced Ground Proximity Warning System	13	13	\$146,150	\$1,900,000	
2	C-5 Crown Skin and Contour Box Beam Fitting Replacement	17	17	\$11,120,000	\$189,040,000	Modification to replace Aft Crown Skin cracks and right/left Contour Box Beam Fitting caused by Stress Corrosion Cracking (SCC).
3	ARC-210 Radio (F-16/A-10)	306	306	\$130,000	\$39,780,000	Provides improved radio communications to include SATCOM capability.
4	C-5A Defensive Systems	12	12	\$1,500,000	\$18,000,000	Provides the C-5 with AAR-47 (V2+) Missile Warning System (MWS) and ALE-47 Countermeasures Dispensing System (CMDS) to detect and counter Infrared (IR) Man-Portable Air Defense Systems (MANPADS).
5	F-16 CFCC	358	358	\$110,251	\$39,470,000	Improved processing and bandwidth capability for future growth. The key to any future flight program upgrades.
6	LAIRCM (C130, C-17, C-5, HC-130, MC-130)	182	171	\$6,286,000	\$1,074,906,000	Allows combat delivery aircraft to survive in an environment of increasing threat complexity and lethality.
7	Advanced Targeting Pods	193	38	\$1,500,000	\$57,000,000	Provides precision targeting capability with an external pod.
8	RC-26 Avionics Upgrade	11	11	\$2,272,727	\$24,999,997	Updates the RC-26 avionics suite to address international communications and navigations requirements changes.
9	Joint Helmet Mounted Cueing System (F-15, F-16, A-10)	409	409	\$249,267	\$101,950,203	Provides off-boresight day/night targeting capability and increases pilot situational awareness for quick 3-dimensional battle space picture.
10	Advanced Electronically Scanned Array Radar (F-15)	34	34	\$8,720,000	\$296,480,000	Smart Color Multi-Function Display – Color display of current FLIR picture and integrates a digital moving map. The additional on-board processing power will enable future modifications such as Situational Awareness Data Link, LARS V12 and IBR threat data.

### III. Air Force Reserve Overview

#### A. Current Status of the Air Force Reserve

##### 1. General Overview

###### a. Mission

The AFR supports the AF mission to deliver sovereign options for the defense of the United States and its global interests by providing global reach, global power and global vigilance. The AFR has a long history of operational engagement and is becoming increasingly involved in the defense of the Nation since September 11, 2001. Headquarters, Air Force Reserve Command (HQ AFRC), manages all AFR resources.

The AFR has 31 flying wings equipped with AFR possessed aircraft and eight associate units that share aircraft with AC units. AFR also has eight associate units operating space mission partnerships including: satellite command and control; missile warning; Joint Space Operations Center (JSpOC); warfare center research, development and testing; space aggressor and the National Security Space Institute. Additionally, AFR has more than 620 mission support units equipped and trained to provide a wide range of services including medical and aeromedical evacuation, aerial support, civil engineering, security forces, intelligence, communications, mobility support, logistics and transportation operations.

The AFR has 391 assigned aircraft comprised of the F-16C/D, A/OA-10, C-5A/B, C-9C, C-40C, C-17A, C/MC/WC/HC-130/E/H/J/N/P, KC-135R/T, B-52H and HH-60G. These units, aircraft, crews and support personnel stand ready for assignment to the Air Combat Command (ACC), Air Education and Training Command (AETC), Air Mobility Command (AMC), AF Space Command (AFSPC), National Reconnaissance Office (NRO), AF Special Operations Command (AFSOC), as well as combatant commands.

#### Top AFR Equipping Challenges

- Large Aircraft Infrared Countermeasures (LAIRCM) and Airlift Defensive Systems (ADS): Equip aircraft that currently lack adequate IR missile protection for operations in the AOR.
- Warfighter AOR Communications and Data Link: Provide a capability for mission changes, image transmission to the ground, threat, and weather updates and effective communications in today's joint warfighter arena.
- C-5 Structures: Replace failing major structure components in the fuselages of C-5 aircraft.

## 2. Status of Equipment

### a. Equipment On-hand

#### i. Fighter Aircraft

##### a) F-16C Block 30 “Fighting Falcon”

The F-16 is a highly maneuverable fighter designed to provide multi-role capability for today’s complex battlefield environment. This aircraft is primarily used for missions in offensive and defensive counter-air, air interdiction, suppression of enemy air defenses, close air support, nontraditional intelligence surveillance and reconnaissance (NTISR), and forward air control–airborne (FAC-A). The AFR has 52 Block 30 F-16C/D aircraft assigned to Joint Reserve Base, Ft Worth, TX, and Homestead AFB, FL. AFR F-16s use EPLRS/SADL, Theater Air Reconnaissance System (TARS) pods, and LITENING II Advanced Technology Targeting Pods with video downlink (VDL) capability. Recent AFR F-16 modifications added the capability to employ the latest generation of precision guided air-to-ground and air-to-air weapons.



*F-16 “Fighting Falcon”*

##### b) A-10 “Thunderbolt II”

The A-10 is specifically designed for close air support and forward air control (FAC) missions. AFR’s 54 A-10 aircraft are located at Whiteman AFB, MO and Barksdale AFB, LA. AFR A-10s are being modified with SADL radios and a Smart Multi-Function Color Display (SMFCD). These modifications provide digital connectivity with air and ground forces, increased targeting pod capability, cursor on target and a moving map. Additionally, all AFR A-10s are being modified with a Beyond Line of Sight (BLOS) radio capability to meet CENTAF’s Urgent Need Request. Further modifications of AFR aircraft will begin in the third quarter of 2008 as part of the ACC funded Precision Engagement (PE) upgrade for all A-10 aircraft.



*A-10 “Thunderbolt II”*

Tactical constraints dictate the use of the A-10 outside its engine’s most efficient operating envelope. Originally designed for tree top employment in central Europe, the A-10 now performs operations at medium to high altitudes in desert environments. The current engines perform poorly in such conditions resulting in reduced weapons and fuel loads.

## ii. Bomber Aircraft

### a) B-52H “Stratofortress”

The B-52H performs: strategic attack, air interdiction, offensive counter air, air-to-surface, suppression of enemy air defenses, mine-laying, joint maritime operations and close air support missions. Nine B-52H aircraft are assigned to AFR at Barksdale AFB, Louisiana. The 917<sup>th</sup> Wing employs: laser guided bombs, conventional air launched cruise missiles, the precision Global Positioning Systems (GPS) guided Joint Direct Attack Munition (JDAM), the Wind Corrected Munitions Dispenser (WCMD), the Joint Air-to-Surface Stand-off Missile (JASSM), and unguided gravity conventional munitions. Reserve B-52Hs now have a LITENING targeting pod capability to allow crews to self-designate targets. Furthermore, these pods will allow crews to visually clear a target area in support of other conventional munitions, improve accuracy by updating target coordinates for JDAM and WCMD and collect target bomb damage assessment (BDA). The B-52 fleet is undergoing an Avionics Midlife Improvement (AMI) modification to resolve inertial navigation system (INS) sustainment issues. Additional AFR B-52 fleet enhancements under consideration are electronic attack (both standoff and penetration missions) and enhanced data link.



*B-52H”Stratofortress”*

## iii. Airlift Aircraft

### a) C-5 “Galaxy,” Inter-Theater Airlift

The AFR has 42 long-range, heavy-lift C-5A/B aircraft assigned to Westover Air Reserve Base (ARB), MA, Lackland AFB, TX, and Wright-Patterson AFB, OH. Lackland is the new home of the C-5 Formal Training Unit (FTU) and conducts all C-5 initial and upgrade training. The steady decrease in reliability and increase in annual maintenance costs of the C-5A fleet are a significant concern. C-5 structural issues: aircraft crown skins and contour boxes are developing corrosion cracks and must be addressed to preclude a significant reduction in aircraft availability beginning in FY 2013-15. Two major modification programs to increase C-5A and C-5B reliability, the C-5 Avionics Modernization Program (AMP) and the Reliability Enhancement and Re-engining Program (RERP), are underway. AMP/RERP improvements should enable the aircraft to achieve a minimum wartime mission capable rate of 75 percent and reduce total ownership costs. Additional capabilities considered for the C-5 are C-5A Defensive Systems, Large Aircraft Infrared Countermeasures (LAIRCM) and Real Time Information in the Cockpit (RTIC).



*C-5 “Galaxy,” Inter-Theater Airlift*

b) C-130 “Hercules,” Intra-theater Airlift

The 88 C-130H/J combat delivery aircraft assigned to AFR provide intra-theater airlift support. AFR C-130s also provide 25-percent of our nation’s aerial firefighting capability and 100-percent of aerial spray requirements. A major long-term modernization program, the Avionics Modernization Program (AMP), plans to convert the entire C-130H fleet to a standard avionics configuration to include a “glass” cockpit, updated Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) system, APN-241 Radar, and night-vision lighting throughout the aircraft. Other critical equipment updates and enhancements needed for C-130H/J variants include Large Aircraft Infrared Countermeasures (LAIRCM), a data link providing command and control and improved situational awareness, and finally, an improved rear-aspect threat scanning capability. These critical modifications will improve aircraft and crew survivability in various threat environments.



*C-130 “Hercules,” Intra-theater Airlift*

c) C-17A “Globemaster III,” Inter and Intra-theater Airlift

Eight March ARB, CA C-17 aircraft provide the Nation with a wide-body heavy-lift aircraft capability that spans inter-continental ranges and can operate into austere tactical airfields. Long-term modernization initiatives include the integration of advanced aircraft defensive systems, updates to Global Air Traffic Management (GATM) systems, Large Aircraft Infrared Countermeasures (LAIRCM) and improved formation station keeping equipment (SKE).



*C-17A “Globemaster III,” Inter and Intra-theater Airlift*

d) C-9C Global VIP Airlift

The AFR operates three VIP airlift mission C-9Cs at Scott AFB, IL to provide reliable worldwide airlift of high-ranking U.S. and foreign dignitaries.



*C-9C VIP Airlift*

e) C-40C Global VIP Airlift

AFR VIP airlift operations expanded in 2007 with the arrival of three new C-40C aircraft. The C-40C more than doubles the range and endurance of current C-9Cs, enhancing worldwide VIP airlift operations.



*C-40C VIP Airlift*

#### iv. Special Mission Aircraft

##### a) WC-130J “Hurricane Hunter”

The AFR conducts 100 percent of the AF weather reconnaissance mission using 10 WC-130J (Hurricane Hunter) aircraft. These aircraft are specially equipped to penetrate hurricanes and typhoons in order to collect and transmit real time storm data for the National Hurricane Center (NHC). This national asset and its crew of meteorologists and other weather specialists have proven critical in forecasting the movement of these dangerous storms. Congressional funding provided in 2005 equipped the WC-130J with a Step Frequency Microwave Radiometer (SFMR) designed to measure emissiveness of the ocean surface and derive estimates of wind speed, wind stress and rainfall. The WC-130J needs to be equipped with an INMARSAT satellite phone to support FAA communications while flying in a storm environment.



*WC-130J “Hurricane Hunter”*

##### b) MC-130E “Combat Talon I”

The AFR’s 10 MC-130E Combat Talon I aircraft provide 10-percent of the AF special operations capability. These uniquely equipped aircraft conduct low-level, deep-penetration missions at night and in adverse weather inserting personnel and supplies into hostile and non-permissive environments. Additionally, these aircraft conduct aerial refueling of special operations helicopters. The Talon I is scheduled to be retired in FY 2013. An upgrade of Talon I’s radar altimeter capability is required to ensure greater flight safety.



*MC-130E “Combat Talon I”*

##### c) HC-130 “King”

AFR has five HC-130N/P aircraft located at Patrick AFB, FL. The HC-130N/P supports the combat search and rescue (CSAR) mission in conjunction with aerial refueling of CSAR helicopters. Because of its versatility, national rescue authorities task the HC-130P/N to perform military operations other than war including civil search and rescue, emergency aeromedical evacuation, disaster relief, international aid, counter drug activities and NASA space shuttle support. The entire HC-130 fleet is nearing the end of its service life and is pending replacement through the HC/MC-X recapitalization program.



*HC-130 “Hercules”*

d) HH-60G “Pave Hawk”

Fifteen AFR HH-60G helicopters conduct around-the-clock wartime recovery of downed aircrew and other distressed personnel from hostile environments. Other HH-60G support missions include civil search and rescue, emergency aeromedical evacuation, disaster relief, international aid, counter drug activities and NASA space shuttle support. Major modifications include FLIR, improved aircraft ballistic armor and a data link/malfunction display. The entire HH-60 fleet is nearing the end of its service life and is pending recapitalization via the CSAR-X procurement program.



*HH-60G “Pave Hawk”*

v. **Aerial Refueling Aircraft**

a) KC-135 “Stratotanker”

AFR KC-135R/T Stratotankers conduct global refueling operations for U.S. and allied aircraft. The half-century old aircraft can carry a maximum of 200,000 pounds of fuel for use and transfer to receivers in flight. The KC-135 can also airlift cargo and personnel, as well as conduct aeromedical evacuation. The AFR has 72 KC-135R/T aircraft assigned to Andrews AFB, MD; Beale AFB, CA; Grissom ARB, IN; March ARB, CA; Portland IAP, OR; Selfridge ANG Base (ANGB), MI; Seymour-Johnson AFB, NC; and Tinker AFB, OK.



*KC-135 “Stratotanker”*

AFR squadrons equipped with KC-135 aircraft provide about 13 percent of the AF KC-135 aerial refueling capability.

vi. **Trainers**

a) C-130 H2 & H3 Weapon Systems Trainers (WST)

AFR uses WSTs to train Active, Guard and Reserve C-130H pilots, flight engineers, and navigators. The WSTs simulate all cockpit instruments, including ground-mapping radar and air defensive systems. They also support night vision goggle (NVG) training and tactical, low level and airdrop training. Stand-alone navigation trainers accompany each WST to provide C-130 navigators quality training in over-water flight procedures and airborne radar approaches.



*C-130 H2 & H3 Weapon Systems Trainers (WST)*

AFR converted a C-130H3 Unit Level Trainer (ULT) into a C-130H2 Flight Training Device (FTD) to accommodate the high number of aircrew members needing primary and continuation training. Finally, a fuselage trainer provides Loadmaster training at Dobbins ARB, GA.

b) C-5 Weapon Systems Trainer (WST)

AFR has two C-5 WSTs. The WST at Westover ARB, MA, has the unique capability to train crews in both air refueling and conventional air-land mission procedures. The other WST, located at Lackland AFB, TX, has a state-of-the-art hydraulic-motion base, a large wrap-around out-the-window visual system, and complies with FAA level C+ Standards. The Lackland WST supports the training of the Pilot, Copilot, and Flight Engineer positions for mission qualification, upgrade, and continuation training. In addition, both WSTs provide maintenance personnel Maintenance Engine Run training.

c) A-10 Full Mission Trainer (FMT)

AFR A-10 FMTs currently operate in a networked/Distributed Mission Operations (DMO) training environment. AFR FMTs support critical-to-mission training capabilities and normal, emergency, instrument, weapons, and tactics procedures. The FMTs also support a distributed mission training capability that adds a tremendous new warfighting capacity. AFR has three A-10 FMTs: one at Whiteman AFB, MO and two at Barksdale AFB, LA. In FY 2007, HQ ACC funded and replaced the Barksdale FMTs with 360 degree visual system FMTs. HQ ACC also plans to replace the Whiteman FMT with two PE modified FMTs in FY 2009. Future upgrades include a PC-based image generator with a wrap-around visual display system and upgrades to the visual database using real world photographic imagery. Concurrent modifications between aircraft and training devices ensure identical configurations and provide effective mission training.

d) F-16 Multi-Task Trainer (MTT)

AFR's five F-16 MTTs support mission training capabilities and normal, emergency, instrument, weapons, and tactics procedures as well as systems training to F16 Block 30-qualified AFR, ANG, and ACC pilots. Once facility construction is complete, two operational MTTs will be located at Homestead ARB, FL, and two at Ft. Worth JRB, TX. Multi-terabyte hard drive systems will allow the F-16 MTTs to use the same mapping databases as the A-10 FMTs. The MTTs will be connected to ARCNet allowing them to participate in networked training on a limited basis. The MTTs will not be able to take full advantage of network training capabilities of DMO until funding is available to purchase 360 degree visual systems. The MTTs are also under contract to install hardware needed to upgrade to Software Core Upgrade (SCU) 6 and to provide Tactical/Theater Airborne Reconnaissance System (TARS) training in the MTT. AFRC plans to upgrade these devices to full tactical mission capability and enable DMO distributed training over the next several years. AFR's F-16 MTT design supports a networked/DMO training capability but cannot operate within a higher fidelity network and is not yet certified to operate in a networked environment.

**vii. Guardian Angel Weapons System (GAWS)**

a) Guardian Angel (GA)

Guardian Angel is an AF CSAR weapon system consisting of combat rescue officers, pararescuemen, support equipment, and SERE (survival, evasion, resistance, and escape) specialists dedicated to: prepare, report, locate, support, recover, and reintegrate isolated personnel. Three teams assigned to the 920<sup>th</sup> Rescue Wing support both the HH-60 and HC-130 rescue platforms and occasionally operate independently during selective ground operations. Due

to the varied worldwide operational locations and missions, the required GA support equipment is extensive and must be modernized continuously.

## **b. Average Age of Current Equipment**

See *Table 2* for the average age of selected major items of equipment as of the beginning of FY-2008.

## **i. Compatibility of Current Equipment with Active Component**

AFR equipment requires compatibility with the AC to support applicable AF missions with the exception of “unique” missions performed by AFR, e.g., weather, spray, firefighting, etc. Congressional funding enables the AFR to keep its mission equipment compatible with the AC. Some of the completed or ongoing upgrades include:

- C/WC-130J Aircraft
- C-130J Weapon System Trainer
- WC-130J Step Frequency Microwave Radiometer (SFMR)
- WC-130J Digital Dewpoint Hygrometer
- C-130H APN-241 Radar
- C-130H3 Flight Training Device (FTD) conversion
- C-130H Upgraded Aerial Spray System
- C/HC-130 Yoke-mounted Countermeasures Dispenser Switch
- C/HC-130 LAIRCM
- F-16 Digital Video Recorders (DVRs)
- F-16 Targeting Pod Upgrades/Procurement
- F-16 ALR-69 Antenna Modification Kits
- F-16 Color Multi Function Displays
- A-10 Situational Data Link Radios
- A-10 Smart Multi Function Color Displays
- A-10 ARC-210 Secure LOS/BLOS Radios
- B-52 Targeting Pod Support Equipment Procurement
- HH-60G 200 Gallon Fuel Tanks
- HH-60G Crashworthy Loadmaster Seats
- C-5A Airlift Defensive System
- F-16 ARC-210 Secure LOS/BLOS Radios
- F-16 Pylon Integrated Dispensing System (PIDS) upgrade.

The next essential modification efforts for the AFR will be:

- C -130 LAIRCM for remaining C-130 H2 units

- C/WC-130J LAIRCM
- C-130H Real Time Information in the Cockpit (Data Link)
- C-130 ARC-210 Secure LOS/BLOS Radios
- C/HC-130 Troop Door Window
- C/MC/HC-130 Crashworthy Loadmaster Seat
- C-130 High Pressure Spray System
- C-5A/B LAIRCM
- C-130H2 APN-241 Radar for remaining C-130 H2s
- C-5A Airlift Defensive System
- A-10 IR Missile Warning System
- A-10/F-16/HC-130 RF MWS Upgrade/Replacement
- A-10 Targeting Pod Spiral Development Procurement
- A-10 Precision Engagement Modification
- HH-60 Data Link/Multifunction Displays
- HH-60 LARS V-12 with Terminal Area Guidance
- F-16 Secure LOS/BLOS ARC-210 Radios
- F-16 and A-10 HMCS.
- Guardian Angel Weapon System (GAWS) Patient Simulator
- GAWS Static High Angle Trainer
- HC-130 Secure Multiband Radios
- HC-130 Blue Force Tracker
- B-52 BLOS Data Link.

**c. Maintenance Issues**

**i. A-10 Wing Station 23 Inspection**

Thus far, a 20 percent failure rate has been noted, and an inspection failure requires a wing change. Mission capable rates are negatively impacted and aircraft availability reduced.

**ii. C-5A Aft Crown Skins Replacement and Contour Box Beam Cracks**

Aircraft crown skins and contour boxes are developing corrosion cracks. Crown skin and contour box repair costs are approximately \$11.8M per aircraft. If not corrected, a significant damage bow wave will hit between FY 2013–2015 and negatively affect aircraft availability.

**iii. Maintenance Support Information Technology Modernization**

Recent AF requirements levied upon all Major Commands mandate implementation of new maintenance support information technologies sooner than the current funding provides. The

new information technologies include Electronic Maintenance Operations Center (EMOC), Tool Accountability System (TAS), and Wireless RF LAN infrastructure.

The deployment of Digital Technical Orders has accelerated the requirement for laptops on the flight line. AF electronic technical order distribution/management system is also a concern. JCALS and ETIMS are both good ideas. However, funding to obtain these new technologies has been a continuous issue. The impact could be significant with respect to aircraft maintenance since newer weapons systems are coming with electronic technical orders. With an increasing dependence on technology, we need to make a commitment to a single solution. AFR cannot afford otherwise if it is to remain compatible with the AC.

#### **d. Modernization Programs and Shortfalls**

Congress initiated NGREA funding in December 1981 to address RC readiness issues. Public laws and legislative language established that this equipment appropriation was to overcome shortfalls in the readiness, combat capability, and modernization issues of Reserve forces. The following are shortfalls categorized by major weapon systems.

##### **i. Fighter Aircraft**

###### **a) F-16**

The current Central Fire Control Computer (CFCC) is a roadblock to capability improvements; a new CFCC is required to support future software upgrades. Replacing the CFCC will increase AFR F-16 employment success by allowing the integration of a HMCS, which allows pilots to target advanced weapons, employ effective threat countermeasures, and stay aware of critical developments in flight. An HMCS would also allow the F-16 to take full advantage of the AIM-9X off-bore sight capability. Finally, the addition of an ARC-210 multiband radio will provide a secure, jam resistant, beyond line-of-sight capability for the F-16.

###### **b) A-10 and OA-10**

AFR A/OA-10s have several modernization shortfalls. Installing an AAR-47 IR missile warning system will significantly improve situational awareness and survivability by cueing pilots when fired upon. Another significant modernization need is a HMCS. The system would increase pilot situational awareness, allow targeting of advanced weapons, allow employment of effective threat countermeasures, and help pilots stay aware of critical developments in flight. Finally, the A/OA-10's present tactical employment requires operations at altitudes where the engines are thrust deficient. This results in reduced weapons and fuel loads. Engine improvements would regain designed combat payload and range capabilities.

##### **ii. Bomber Aircraft—B-52H**

A major modification requirement is to provide a data link for a situational awareness system to support lengthy B-52H mission times. The battlespace can change significantly over hours of time during B-52H mission. A data link system would provide a needed up-to-date status of enemy air and ground threats as well as friendly positions. The display system would also provide the aircrew with target set updates during flight.

### **iii. Airlift/Special Missions Aircraft**

#### a) HH-60G and HC-130—Combat Search and Rescue (CSAR)

Most military contingency operations require CSAR support. The HH-60G helicopters and HC-130 aircraft of the 920<sup>th</sup> Rescue Wing are in constant demand by multiple agencies to support a variety of operational and contingencies missions. An AF program is currently underway to replace the aging HH-60 helicopter fleet as part of the CSAR-X program. In addition, the AF is also considering options to replace HC-130 tankers. Many of these airframes have exceeded 40 years of service. AFRC has been able to utilize NGREA funds to modernize some combat rescue assets in support of AF contingency operations and AEF rotations.

#### b) C-130

Future upgrades include the continued modernization of the C-130 with the Yoke-mounted Countermeasures Dispenser Switch, APN-241 navigation and ground mapping radar, LAIRCM and Real Time Information in the Cockpit data link to improve aircrew protection and weapon system reliability. A high pressure spray system is needed on C-130s at Youngstown ARS, OH, to satisfy EPA requirements for the spray mission.

#### c) C-5

Currently the C-5A does not have defensive system to allow the aircraft to fly in hostile areas. Modifying the C-5A with AAR-47(V)2 Missile Warning System and ALE-47 Countermeasures Dispenser System will increase aircrew and aircraft protection, support the Air Mobility Master Plan, and reduce the operations tempo on current defensive equipped aircraft.

### **e. Overall Equipment Readiness**

Presently, AFR weapons systems maintain equipment readiness on par with the AC except where limited by modernization restrictions. AFR achieves readiness through constant close coordination with the lead commands to assure inclusion of AFR assets and mission capabilities in current requirements and funding.

### **B. Changes Since Last NGRER**

The AFR VIP airlift fleet grew by three C-40C aircraft in 2007. LAIRCM upgrades to these aircraft are scheduled to take place in FY 2009–FY 2010.

Replacing C-5A structures damaged by stress, corrosion and cracking will cost an estimated \$304M on AFR's 26 aircraft. Replacement will eliminate the associated flight safety risks and maintain aircraft availability.

## C. Future Years Program (FY 2009–FY 2011)

### 1. FY 2009 Equipment Requirements

The following are the top 25 unfunded major equipment requirements validated by the AFR Requirements Review Council. The AFR continues to pursue AF and OSD support to provide funding necessary to meet these equipment needs.

Priority	Modernization Requirements List	Program Description
1	C-40D Aircraft to replace C-9C	Fund purchase of three multi-role C-40Ds and additional operations personnel to replace aging, less-capable C-9Cs.
2	C-130 LAIRCM	Install LAIRCM Group A on 13 C-130Hs and Group B on 10 C-130Hs. Program would modify all remaining AFR C-130H2/3 aircraft.
3	C-5A Airlift Defensive Systems (ADS)	Install ADS (ALE-47/AAR-47) on 16 C-5A aircraft at Lackland AFB. Currently, funds are in place to start ADS modification on C-5As at Wright Patterson AFB.
4	A-10/F-16 CMS Memory Upgrade	Procure upgrade to existing ALQ-213 system to alleviate shortfalls and obsolescence issues by increasing ALQ-213 processing and memory capabilities.
5	C-130 SLOS/BLOS ARC-210 Radio	Procure and install group A and group B ARC-210 Radio for AFR C-130 aircraft to provide C2 link and maximize C-130 crew situational awareness with line-of-sight-(LOS) and beyond-line-of sight (BLOS) capabilities.
6	A-10 IR Missile Warning System (MWS)	Procure an IR MWS to integrate missile warning into ALQ-213 countermeasures and provide pilot with real-time indications and a selectable automatic countermeasure response for faster reaction time.
7	C-130 APN-241 Radar	Procure and install the APN-241 Radar; provides low power, all weather, color radar on remaining C-130H2 aircraft.
8	A-10/F-16/HC-130 RF MWS Upgrade/Replacement	Procure improved and integrated electronic attack (EA) and electronic protection (EP) equipment for aircraft
9	C-5 LAIRCM	Modify 42 C-5 aircraft (Wright-Patterson, 10; Lackland, 16; Westover, 16) with Group A wiring, and procure 42 Group B (LAIRCM lite) kits plus training, spares and support equipment. LAIRCM provide protection against IR threats.
10	F-16 Upgraded CFCC	Procure an upgrade to enable integration of critical items, subsystems and an enhanced 1553 bus with Ethernet capability to increase bandwidth and throughput
11	C-130 SAFIRE Look Out Capability	Procure and installs a large square scanning window on AFR C-130 aircraft. C-130H2 aircraft currently have a small round window on the aircraft that are not large enough to properly scan for threats. Requirement for visual threat detection has become increasingly more important.
12	HH-60G Tactical Data Link	Install 15 Group A and Group B systems for all AFR HH-60 Aircraft at the 920th Rescue Wing. Provides "common operating picture" for situational awareness, blue force tracking, and real-time threat updates for increased survivability while conducting missions within Combat Search and Rescue Task Forces
13	F-16 Secure Multiband Radio/BLOS Data Transfer Capability	Procure 54 AN/ARC-210 Group A and 48 Group B radios for AFR F-16 aircraft. The AN/ARC-210 radio is a multiband, jam resistant, beyond line-of-sight (LOS), secure radio replacement for the current F-16 VHF radio. The radio is UHF, VHF, SATCOM, SINCGARS, and Secure capable.
14	B-52 Alternate Mission Equipment (AME)	Procure and install avionics for 9 AFR B-52s, to support introduction of new systems to support the AGM-142 Have Nap missile and other guided weapons on board. The AME doubles the size of the current display, which is associated exclusively with the AGM-142.
15	Security Force Night Vision Devices	Procure PVS-14 and PVS-17 night vision devices for AFR Security Forces. NVDs provide enhanced targeting range and identification.
16	C-5 SAFIRE Look Out Capability	Procure system to provide aircrews enhanced rear visibility at the 3 and 9 o'clock positions. Current rear visibility from small troop door windows is restricted, decreasing threat observation capability.
17	LITENING Spiral Upgrade	Procure periodic upgrades needed to keep targeting pods at required capability standard.
18	C-17 Combat Track II Systems	Procure Combat Track II training asset for C-17s at March ARB. System integrates and correlates national intelligence and theater tactical broadcasts on military aircraft, providing timely intelligence to support combat forces
19	C-130 MAF Data Link Integration	Procure and modify C-130 aircraft with a tactical data link that provides C2 link and maximizes C-130 crew situational awareness.

Priority	Modernization Requirements List	Program Description
20	C-5 Yoke-mounted Countermeasures Dispenser Switch	Install manual countermeasures dispense switch on pilot/copilot Yoke. If the automated system fails to identify a missile launch, the current method for defending against forward missile threats is for the pilot or copilot to call out the threat and have an observer manually dispense flares.
21	HH-60 Mobile Aircrew Web Restraining System (MAWRS)	Install MAWRS for 15 AFR HH-60 aircraft. The modification prevents highly mobile aircrew from being ejected during a crash event and provides fall protection when working near open aircraft doors.
22	C/HC/MC-130 Crashworthy Loadmaster Seats	Procure crashworthy seating for loadmasters and/or scanners who occupy the paratroop door scanning position allowing the loadmasters and scanners to be unrestrained at the paratroop doors during critical phases of flight to properly scan for threats to the aircraft.
23	MC-130 Combined Altitude Radar Altimeter (CARA)	Replace/upgrade existing HG9050 radar altimeters on AFR MC-130E aircraft. Expands radar altimeter coverage from 5,000 to 15,000 ft, and reduces aircrew and equipment mission risk.
24	A-10 Integrated Communications Suite	Procure an up front controller as a human factor engineering solution and integrate ARC-210 radios, secure voice communications and data link.
25	KC-135 Armor	Installs protective armor in aircrew area and around liquid oxygen bottles. System will enhance aircrew and aircraft survivability by providing aircrew protection against small arms fire.

## 2. Funded New Equipment Procurements

The AFR expects to receive approximately \$45M in FY 2008 NGREA funds. The AFR selected the following equipment procurement efforts as the most critical to pursue within the total authorized amount:

- A-10/F-16 Countermeasures Set (CMS) Memory Upgrade
- C-130 Secure SLOS/BLOS ARC-210 Radios
- F-16 Upgraded Commercial Fire Control Computers (CFCC)
- C-130H APN-241 Radars
- C-5A Airlift Defensive Systems
- C-130 SAFIRE Look Out Capability
- LITENING Targeting Pods Spiral Upgrade
- HH-60G Tactical Data Link
- B-52 Alternate Mission Equipment
- Security Force Night Vision Devices/Laser Sights
- Combat Track II Systems
- HH-60G Mobile Aircrew Web Restraining System (MAWRS)
- C/HC/MC-130 Crashworthy Loadmaster Seats
- Space Electronic Warfare Trainer

## 3. Anticipated Transfers and Withdrawals from AC to RC

None.

## **D. Summary**

AFR mobilizes forces to support worldwide contingencies without impact to combat readiness. Additionally, Selected Reserve units are fully capable of meeting their required contingency response times. This is an impressive capability and is the RC model of seamless integration into the gaining Major Commands' operational employment. AFR combat support forces continually combine with AC AEF forces to satisfy operational employment requirements in contingencies in all theaters of operations. Modernization is the key to maintaining an effective force.

AFR is ever committed to modernization efforts that meet our Nation's Total Force capability needs for the current fight and for future battles. AFR plans, programs and facilitates as many equipment requirements as possible within the AF process. For those modernization needs that remain unfunded, AFR's internal requirements review process prioritizes and validates vital unfunded war fighter requirements for NGREA and supplemental funding consideration.

The AFR continues to be the nation's unrivaled wingman in the fight.

## Consolidated Major Item Inventory and Requirements

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

Nomenclature	Equip No.	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
<b>AIR REFUELING</b>							
AIR REFUELING, KC-135R/T	KC-135R/T	\$47,700,000	64	64	64	64	64
<b>AIR SUPPORT</b>							
SPECIAL OPS, MC-130E	MC-130E	\$72,300,000	10	10	10	10	10
WEATHER, WC-130J	WC-130J	\$75,500,000	10	10	10	10	10
<b>AIRLIFT</b>							
AIRLIFT, C-130H	C-130H	\$29,200,000	80	80	80	80	80
AIRLIFT, C-130J	C-130J	\$54,000,000	8	8	8	8	8
AIRLIFT, C-17A	C-17A	\$219,200,000	8	8	8	8	8
AIRLIFT, C-5A	C-5A	\$119,300,000	24	24	24	24	24
AIRLIFT, C-5B	C-5B	\$156,800,000	14	14	14	14	14
AIRLIFT, C-9C	C-9C	\$22,100,000	3	3	3	3	3
AIRLIFT, C-40C	C-40C	\$62,500,000	3	3	3	3	3
<b>BOMBERS</b>							
BOMBERS, B-52H	B-52H	\$55,400,000	8	8	8	8	8
<b>FIGHTERS</b>							
FIGHTER, A-10A	A-010A	\$10,700,000	48	48	48	48	48
FIGHTER, F-16C	F-16C	\$19,500,000	46	46	46	46	46
FIGHTER, F-16D	F-16D	\$19,500,000	2	2	2	2	2
<b>RESCUE</b>							
RESCUE, HC-130N	HC-130N	\$19,100,000	1	1	1	1	1
RESCUE, HC-130P	HC-130P	\$19,100,000	4	4	4	4	4
RESCUE, HH-60G	HH-60G	\$17,600,000	13	13	13	13	13

### Average Age of Equipment

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

Nomenclature	Equip No.	Average Age	Remarks
<b>AIR REFUELING</b>			
AIR REFUELING, KC-135R/T	KC-135R/T	48	
<b>AIR SUPPORT</b>			
SPECIAL OPS, MC-130E	MC-130E	44	
WEATHER, WC-130J	WC-130J	11	
<b>AIRLIFT</b>			
AIRLIFT, C-130H	C-130H	20	
AIRLIFT, C-130J	C-130J	5	
AIRLIFT, C-17A	C-17A	3	
AIRLIFT, C-5A	C-5A	39	
AIRLIFT, C-5B	C-5B	21	
AIRLIFT, C-9C	C-9C	32	
AIRLIFT, C-40C	C-40C	1	
<b>BOMBERS</b>			
BOMBER, B-52H	B-52H	47	
<b>FIGHTERS</b>			
FIGHTER, A-10A	A-10A	29	
FIGHTER, F-16C	F-16C	22	
FIGHTER, F-16D	F-16D	23	
<b>RESCUE</b>			
RESCUE, HC-130N	HC-130N	39	
RESCUE, HC-130P	HC-130P	44	
RESCUE, HH-60G	HH-60G	18	

### Service Procurement Program - Reserve (P-1R)

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

Nomenclature	FY 2009	FY 2010	FY 2011
<b>MODIFICATION OF AIRCRAFT</b>			
B-52	\$4,724,000	\$8,999,000	\$9,099,000
A-10	21,482,000	45,374,000	40,733,000
F-16	12,235,000	10,832,000	8,918,000
C-5	215,562,000	358,948,000	399,903,000
C-17A	14,588,000	21,540,000	20,702,000
C-130	92,891,000	108,416,000	103,622,000
C-130J MODS	14,475,000	27,400,000	28,357,000
C-135	19,149,000	20,237,000	4,975,000
<b>VEHICULAR EQUIPMENT</b>			
PASSENGER CARRYING VEHICLES	1,697,000	1,170,000	1,113,000
MEDIUM TACTICAL VEHICLE	1,887,000	2,196,000	1,749,000
SECURITY AND TACTICAL VEHICLES	2,203,000	1,011,000	1,020,000
FIRE FIGHTING/CRASH RESCUE VEHICLES	406,000	416,000	
RUNWAY SNOW REMOVAL & CLEANING EQUIPMENT	2,512,000	3,914,000	2,281,000
ITEMS UNDER \$5M (VEHICLES)	6,358,000	5,921,000	885,000
<b>ELECTRONICS &amp; TELECOMMUNICATIONS EQUIPMENT</b>			
NATIONAL AIRSPACE SYSTEM	1,464,000	5,866,000	6,514,000
WEATHER OBSERVATION FORECAST	206,000		
AF GLOBAL COMMAND & CONTROL SYSTEM	775,000	758,000	798,000
AIR & SPACE OPERATIONS CTR-WPN SYSTEM	7,956,000	7,929,000	11,909,000
BASE INFO INFRASTRUCTURE	11,127,000	24,932,000	27,756,000
TACTICAL C-E EQUIPMENT	11,140,000	10,533,000	13,083,000
CCTV/AUDIOVISUAL EQUIPMENT	386,000	529,000	461,000
<b>OTHER BASE MAINTENANCE &amp; SUPPORT EQUIPMENT</b>			
NIGHT VISION GOGGLES	503,000	716,000	
MECHANIZED MATERIAL HANDLING EQUIPMENT	517,000	552,000	561,000
BASE PROCURED EQUIPMENT	188,000	207,000	209,000
ITEMS UNDER \$5M (BASE SUPPORT)	542,000	195,000	182,000
<b>TOTAL</b>	<b>\$444,973,000</b>	<b>\$668,591,000</b>	<b>\$684,830,000</b>

### National Guard and Reserve Equipment Appropriation (NGREA) Procurements

*NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.*

Nomenclature	FY 2006	FY 2007	FY 2008
C-130H APN-241 RADAR	\$8,690,000	\$2,750,000	\$7,000,000
A-10 MULTI-FUNCTION COLOR DISPLAY (MFCD)	4,540,000		
JOINT HELMET MOUNTED CUEING SYSTEM (JHMCS)	1,300,000		
A-10 LITENING PODS	9,997,000		
END TO END TESTER FOR AAR-47 MISSILE DETECTION SYSTEM	250,000		
PARARESCUE JUMPER (PJ) NIGHT VISION GOGGLES	2,100,000		
C-130 YOKE-MOUNTED CHAFFE/FLARE DISPENSER SWITCH	1,800,000	2,600,000	
A-10/OA-10 SITUATIONAL AWARENESS DATA LINK (SADL) / ENHANCED POSITION LOCATION REPORTING SYSTEM (EPLRS)	920,000		
B-52 SMART MULTI-FUNCTION COLOR DISPLAY (MFCD)		1,200,000	
A10+ INERTIAL AIDED MUNITIONS (IAMS) INTEGRATION		1,250,000	
C-5 ARMOR		2,500,000	
C-5A AIRLIFT DEFENSIVE SYSTEMS		10,500,000	1,300,000
LITENING TARGETING POD SPIRAL UPGRADE		4,309,000	4,295,000
F-16 ARC-210 LINE OF SIGHT (LOS) RADIO		9,750,000	
A-10/F-16 COUNTERMEASURES SET (CMS) MEMORY UPGRADE			1,500,000
C-130 SECURE LINE OF SIGHT (SLOS)/BEYOND LINE OF SIGHT (BLOS) CAPABILITY (ARC-210 RADIO)			10,000,000
F-16 UPGRADED COMMERCIAL FIRE CONTROL COMPUTER (CFCC)			3,600,000
C-130 SAFIRE LOOK OUT CAPABILITY			7,000,000
HH-60G TACTICAL DATA LINK			1,800,000
B-52 ALTERNATE MISSION EQUIPMENT			200,000
SECURITY FORCE NIGHT VISION DEVICES/LASER SIGHTS			1,100,000
COMBAT TRACK II SYSTEMS			1,100,000
HH-60G MOBILE AIRCREW WEB RESTRAINING SYSTEM (MAWRS)			300,000
C/HC/MC-130 CRASHWORTHY LOADMASTER SEATS			5,000,000
SPACE ELECTRONIC WARFARE TRAINER			500,000
<b>TOTAL</b>	<b>\$29,597,000</b>	<b>\$34,859,000</b>	<b>\$44,695,000</b>

**Projected Equipment Transfer/Withdrawal Quantities**

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the AC receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty	Remarks

**Service has no planned transfers or withdrawals for the years FY 2009 thru FY 2011**

### FY 2005 Planned vs Actual Procurements and Transfers

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGREA columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
<b><u>FY 2005 PLANNED TRANSFERS &amp; WITHDRAWALS</u></b>							
AIR REFUELING, KC-135R	KC-135R	+8	+8				
AIR REFUELING, KC-135E	KC-135E	-8	0				
THEATER AIRLIFT, C-130E	C-130E	-5	0				
AIRLIFT, C-130H	C-130H	+1	0				
AIRLIFT, C-130J	C-130J	+3	+3				
AIRLIFT, C-5A	C-5A	+2	+2				
FIGHTER, A-10A	A-10A	-6	0				
TRAINER, C-130 H2, ULT	C-130ULT	+1	+1				
<b><u>FY 2005 P-1R EQUIPMENT</u></b>							
<b>AIRCRAFT PROCUREMENT</b>							
C-40				\$0	\$221,386,000		
<b>MODIFICATION OF AIRCRAFT</b>							
B-52				8,299,000	9,365,000		
A-10				7,471,000	7,600,000		
F-16				3,600,000	14,925,000		
C-5				23,222,000	27,852,000		
C-130				0	19,799,000		
C-130J				12,553,000	7,306,000		
C-135				7,785,000	7,623,000		
H-60				16,900,000	11,879,000		
<b>AIRCRAFT SUPPORT EQUIPMENT &amp; FACILITIES</b>							
COMMON SUPPORT EQUIPMENT				13,645,000	39,678,000		
<b>VEHICULAR EQUIPMENT</b>							
TRUCK, CARGO-UTILITY, 3/4 TON				935,000	290,000		
TRUCK MAINT/UTILITY/DELIVERY				935,000	673,000		
HIGH MOBILITY VEHICLE (MYP)				667,000	0		
CARGO & UTILITY VEH - ITEMS UNDER \$5M				601,000	613,000		
HMMWV, ARMORED				345,000	290,000		
TRACTOR, A/C TOW, MB-4				902,000	898,000		
TRACTOR, TOW, FLIGHTLINE				268,000	0		
SPECIAL PURPOSE VEHICLES - ITEMS UNDER \$5M				1,457,000	1,441,000		
TRUCK, F/L 10,000 LB				982,000	887,000		
MATERIALS HANDLING EQUIPMENT - ITEMS UNDER \$5M				132,000	138,000		
RUNWAY SNOW REMOVAL & CLEANING				2,368,000	966,000		

## FY 2005 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual
BASE MAINTENANCE SUPPORT - ITEMS UNDER \$5M				2,180,000	1,808,000		
<b>ELECTRONICS &amp; TELECOMMUNICATIONS EQUIPMENT</b>							
NATIONAL AIRSPACE SYSTEM				5,843,000	202,000		
AF GLOBAL COMMAND & CONTROL SYSTEM				525,000	517,000		
COMBAT TRAINING RANGES				700,000	699,000		
GCSS-AF FOS				100,000	0		
THEATER BATTLE MGT C2 SYS				1,997,000	620,000		
BASE INFORMATION INFRASTRUCTURE				11,118,000	11,104,000		
DEFENSE MESSAGE SYSTEM (DMS)				315,000	0		
NAVSTAR GPS SPACE				1,220,000	1,223,000		
CCTV/AUDIOVISUAL EQUIPMENT				1,026,000	499,000		
<b>OTHER BASE MAINTENANCE &amp; SUPPORT EQUIPMENT</b>							
TEST EQUIPMENT - ITEMS UNDER \$5M				4,491,000	4,489,000		
NIGHT VISION GOGGLES				76,000	84,000		
PERSONAL SAFETY & RESCUE EQ - ITEMS UNDER \$5M				188,000	186,000		
MECHANIZED MATERIAL HANDLING				600,000	595,000		
DEPOT PLANT & MHE - ITEMS UNDER \$5M				88,000	88,000		
ELECTRICAL EQUIPMENT - ITEMS UNDER \$5M				98,000	104,000		
PHOTOGRAPHIC EQUIPMENT				150,000	150,000		
AIR CONDITIONERS				101,000	100,000		
BASE SUPPORT EQUIPMENT - ITEMS UNDER \$5M				818,000	800,000		
<b>FY 2005 NGREA EQUIPMENT</b>							
F-16 LITENING POD UPGRADE MODIFICATION						\$8,600,000	\$6,074,127
C-130E/H APN-241 RADAR REPLACEMENT						1,771,000	1,229,268
C-130 LARGE AIRCRAFT INFRA-RED COUNTERMEASURES (LAIRCM)						26,000,000	18,586,793
C-5A AIRLIFT DEFENSIVE SYSTEMS						3,475,000	0
CLASSIFIED PROGRAM						0	7,260,000
ROVER UPGRADE TO LITENING AT POD						0	2,207,490
A-10/OA-10 SADL / EPLRS						0	4,275,000
C-130 H3 ULT CONVERSION TO FTD COMPLETE						0	182,322
HH-60G 200 GAL AUXILIARY FUEL TANK						0	2,100,000
MOTOR VEHICLES FOR MEDICAL UTCS						0	1,900,000
<b>TOTAL</b>				<b>\$134,701,000</b>	<b>\$396,877,000</b>	<b>\$39,846,000</b>	<b>\$43,815,000</b>

**Major Item of Equipment Substitution List**

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No

**Service Does Not Use Substitution To Satisfy  
Major Item Equipment Requirements**

### Significant Major Item Shortages

*NOTE: This table provides a RC top 15 prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	C-40D aircraft to replace C-9s	3	3	\$123,330,000	\$369,990,000	C-40Ds and additional operations personnel needed to replace aging, less capable C-9C aircraft.
2	C-130 Large Aircraft Infrared Countermeasures (LAIRCM) <sup>1</sup>	80	28	\$2,390,000	\$66,920,000	Current defensive systems do not effectively protect the aircraft from current and future IR threats.
3	C-5A Airlift Defensive Systems	25	16	\$1,060,000	\$16,960,000	Current defensive systems do not effectively protect the aircraft from current and future IR threats.
4	A-10/F-16 CMS Memory Upgrade	108	108	\$13,500	\$1,458,000	Upgrade to legacy ALQ-213 will significantly improve coordination of the aircraft defensive systems improving aircraft survivability.
5	C-130 SLOS/BLOS Capability (ARC-210)	90	90	\$300,000	\$27,000,000	Current combat operations have highlighted the need for comprehensive networked command and control throughout all theater operations. Installation of a tactical data link provides crews situation awareness with line-of-sight and beyond-line-of-sight capabilities.
6	A-10 Missile Warning System	54	54	\$125,000	\$6,750,000	Current defensive systems do not effectively protect the aircraft from current and future IR threats.
7	C-130 APN-241 Radar	74	25	\$872,000	\$21,800,000	Current radar has reliability, maintainability issues and does not provide all weather precision airdrop capability.
8	A-10/F-16/HC-130 RF MWS Upgrade/Replacement	113	113	\$13,000	\$1,469,000	Current radar defensive systems do not effectively protect the aircraft. Improvements to the Legacy ALR69 can significantly improve aircraft protection.
9	C-5 Large Aircraft Infrared Countermeasures (LAIRCM) <sup>1</sup>	42	42	\$10,000,000	\$420,000,000	Current defensive systems do not effectively protect the aircraft from current and future IR threats.
10	F-16 Upgrade CFCC	54	54	\$60,000	\$3,240,000	Upgraded CFCC required to make use of F-16 SCU 8 capabilities.
11	C-130 SAFIRE Look Out Capability	61	61	\$250,000	\$15,250,000	Small round windows in the cargo compartment and troop doors severely restrict observer's view to sides and aft of the aircraft.
12	HH-60G Tactical Data Link	15	15	\$133,000	\$1,995,000	The HH-60 requires a data link capability to rapidly transfer information during combat search and rescue Operations.

**Significant Major Item Shortages**

13	F-16 Secure Multiband Radio/ BLOS Data transfer capability	54	54	\$101,850	\$5,499,900	The F-16 has no beyond LOS capability (SATCOM) with ground forces or Command and Control assets and the Secure capability (KY-58) is limited.
14	B-52 Alternate Mission Equipment	9	9	\$167,000	\$1,503,000	Provides targeting pod interface. Replaces unsupportable, limited numbers of AGM-142 HAVE NAP legacy systems.
15	Security Forces Night Vision Devices	380	380	\$4,000	\$1,520,000	Provides enhanced target sighting and identification . Modern NVDs ensure mission capability and equipment compatibility with AC Security Forces, sister services, and coalition forces.
(1) Total shortage cost includes spares.						

## **Chapter 6**

### **United States Coast Guard Reserve**

#### **I. Coast Guard Overview**

Established in 1790 as a small maritime law-enforcement agency, the present day United States Coast Guard (USCG) and the United States Coast Guard Reserve (USCGR) are a unique military, multi-mission maritime force that engages in a variety of military and civil activities that touch upon almost every facet of the maritime environment of the United States. America's Coast Guard is a unique instrument of national security and a key component of this nation's emergency response apparatus. The Coast Guard Reserve significantly enhances the Coast Guard's ability to respond to all threats and all hazards. A trained and ready reserve force, backed by a robust Reserve component (RC) mission support system, is essential to our ability to respond to acts of terrorism, disaster, or other contingencies within the maritime domain. Accordingly the Coast Guard Reserve must embody the competencies necessary to perform three functions (1) Maritime Homeland Security (2) Domestic and expeditionary support to National Defense, and (3) response to domestic disasters both natural and man-made.

#### **A. Coast Guard Planning Guidance**

##### **1. United States Code**

There are myriad references in the United States Code (U.S.C.), primarily in Titles 10, 14, and 33, that describe the Coast Guard and outline its responsibilities and various authorities. The following references specifically address Coast Guard defense responsibilities: 10 U.S.C. 101, 14 U.S.C. 1, 14 U.S.C. 2, 14 U.S.C. 3, and 14 U.S.C. 145.

##### **2. Defense and Transportation Memorandum of Agreement**

The October 3, 1995 Memorandum of Agreement (MOA) between the Secretaries of Defense and Transportation for "Use of U.S. Coast Guard Capabilities and Resources in Support of the National Military Strategy" provides specific guidance for military planning and operations. This MOA remains in effect after the transfer of the Coast Guard to the Department of Homeland Security (DHS). The MOA's primary objectives are to identify national defense capabilities of the Coast Guard and to improve Coast Guard responsiveness as a force provider. Annexes to this MOA address the following:

- Maritime Interception Operations to enforce the seaward portion of certain sanctions against other nations or group of nations. The operations may include stopping, boarding, searching, diverting, or redirecting vessel traffic.
- Marine Environmental Response Operations to facilitate planning, training, and deployment of personnel in direct support of Combatant Commander environmental response requirements.
- Port Operations Security and Defense to ensure port and harbor areas are maintained free of hostile threats, terrorist actions, and safety deficiencies that would be a threat to the

deployment of military resources during contingencies, in both Seaports of Embarkation and Seaports of Debarkation.

- Peacetime Military Engagement to guide participation in Combatant Commander engagement strategies.
- Coastal Sea Control Operations to provide for deployment of Coast Guard personnel and platforms in support of Combatant Commander requirements.

### **3. National Fleet Policy Statement**

The March 3, 2006 *National Fleet Policy* statement by the Chief of Naval Operations and the Commandant of the Coast Guard synchronizes research and development, planning, fiscal stewardship, procurement, development of doctrine, training, and operations. To implement the National Fleet, the Coast Guard and Navy work together to plan, acquire, and maintain forces that mutually support and complement each Service's roles and missions. While charged with different aspects of the national security, the Coast Guard and Navy cooperate and integrate capabilities to ensure the highest level of maritime capabilities and readiness during surge or high-tempo operations. The National Fleet is:

- Comprised of ships, boats, aircraft, and shore command and control nodes that are affordable, adaptable, interoperable, and possess complementary capabilities;
- Designed, wherever possible, around common equipment and systems, and includes coordinated operational planning, training, and logistics; and
- Capable of supporting the broad spectrum of national security requirements, from power projection to security and defense of the homeland.

### **4. Unified Maritime Strategy**

On October 17, 2007, the maritime forces of the United States jointly released “A Cooperative Strategy for 21st Century Seapower,” a historical first. The strategy stresses a common vision of seapower in both protecting the homeland and winning our Nation's wars. It calls for unprecedented integration and interoperability among the Navy, Marine Corps, and Coast Guard and envisions mission-tailored force packages comprised of “various combinations of security forces, mobile training teams, construction battalions, health services, law enforcement, and civil affairs units...” Homeland defense is cited as the most obvious example of the requirement for greater force integration with attendant implications for ensuring the readiness of our reserve forces:

“It is not sufficient to speak of homeland defense in terms of splitting the responsibilities and authorities between the Navy and the Coast Guard along some undefined geographic boundary. Rather, the Sea Services must—and will—work as one wherever they operate in order to defend the United States. Consistent with the *National Fleet Policy*, Coast Guard forces must be able to operate as part of a joint task force thousands of miles from our shores, and naval forces must be able to respond to operational tasking close to home when necessary to secure our nation and support civil authorities. Integration and interoperability are key to success in these activities,

particularly where diverse forces of varying capability and mission must work together seamlessly in support of defense, security, and humanitarian operations.”

## **5. Integration of the Coast Guard Reserve**

Today, more than a decade after the Coast Guard embraced integration, about 80 percent of the Selected Reserve (SELRES) force is directly assigned to Active component (AC) units. The rest are assigned to the Coast Guard’s eight Port Security Units (PSUs) or to DoD units and staffs. Cumulative recalls of Coast Guard Reservists under 10 U.S.C. 12302 totaled over 6,800 since 9/11 with Reservists serving at home safeguarding Maritime Homeland Security and overseas in direct support of the Combatant Commanders.

There are approximately 300 SELRES members mobilized under 10 U.S.C. 12302 at the time of this writing; most of them providing security for CONUS military outload operations. The majority of those recalled served domestically, safeguarding ports and waterways alongside 95,000 miles of U.S. coastline or enforcing security zones in strategic outload ports on the Atlantic, Pacific, and Gulf Coasts.

A significant number have served overseas as members of PSUs and Naval Coastal Warfare (NCW) units operating in Iraq, Kuwait, and Bahrain, and as Individual Mobilized Augmentees (IMAs) supporting Coast Guard units in the Iraq theater.

### **B. Coast Guard Equipping Policy**

Equipment for domestic operations is provided from within the DHS budget.

Equipment for mobilization under 14 U.S.C. 712 or for normal operational surges is provided by AC units from existing unit inventories, from supporting units, or through contemporary procurement using the DHS budget.

All Coast Guard RC equipment is managed by the Coast Guard AC since the Coast Guard is an integrated workforce.

DoD provides selected equipment for the Coast Guard to perform defense operations in support of the Combatant Commanders. This includes weapons and communications systems that are interoperable with the U.S. Navy and allied forces, and other special purpose equipment needed for the Coast Guard to meet DoD requirements. Units affected include the National Security Cutter (NSC), 378’ high endurance cutters, 270’ and 210’ medium endurance cutters, 110’ patrol boats, PSUs, and the Engineering Logistics Center’s Mobile Support Unit (MSU).

Personal Protective Equipment (PPE) for AC and RC personnel is acquired from unit operations and maintenance budgets.

### **C. Plan to Fill Mobilization Shortages in the RC**

The Coast Guard is continuing its comprehensive review to determine the optimal structure and size of the Selected Reserve; this effort is part of a broader review of Coast Guard contingency planning. As part of this planning review, the Service is nearing completion of key planning assumptions that will determine contingency staffing requirements for all segments of the Coast

Guard workforce. These planning assumptions will realign the manner in which the Service structures and shapes its Selected Reserve to respond to Maritime Homeland Security, National Defense, and Disaster Response and Recovery missions.

#### **D. Initiatives Affecting RC Equipment**

Consistent with integration, approximately 80 percent of the SELRES use unit-level equipment acquired and supported by ongoing operations funding mechanisms. The remaining SELRES are assigned to deployable Port Security Units (PSUs), Naval Coastal Warfare Squadrons and Naval Coastal Warfare Groups. The following initiatives were pursued in recent years:

- The Deployment Operations Group (DOG): The mission of the DOG is to provide organized, equipped and trained adaptive force packages to Coast Guard, DHS, DoD, and interagency operational and tactical commanders. The DOG command includes the National Strike Force, Tactical Law Enforcement Teams, Port Security Units, Maritime Safety and Security Teams, and the Maritime Security Response Team. As currently configured, the DOG includes 12 percent of all Coast Guard Reserve forces. The DOG maximizes and sustains superior mission execution by ensuring interoperability and standardization.
- Safety is a top priority of the Coast Guard. The Coast Guard has funded the purchase of Personal Protective Equipment (PPE) needed for reservists to safely conduct training and operations alongside their AC counterparts. Since integration of RC administration into the AC in the mid-1990s, PPE is normally funded through the AC account.

#### **E. Plan to Achieve Full Compatibility between AC and RC**

SELRES personnel are fully integrated into the AC units. They follow the same training programs and perform assigned duties side-by-side with AC personnel. PSU and Naval Coastal Warfare Commands, that are mostly reserve-staffed, are specifically organized for OCONUS military operations. The typical reservist is indistinguishable from their AC counterpart.

## II. Coast Guard Reserve Overview

### A. Current Status of the Coast Guard Reserve

#### 1. General Overview

##### a. Funding

The Coast Guard Reserve Training Appropriation for FY 2008 requested \$126.9M for necessary expenses of the Coast Guard Reserve for operations and maintenance of the reserve program, personnel and training costs, and equipment and services.

##### b. Personnel

The Coast Guard Reserve provides critical skills and experience that are vital to the Coast Guard's ability to lead, manage, and coordinate the national response to acts of terrorism, disasters or other emergencies in the maritime region. Accordingly, the core strategic purpose of the Coast Guard Reserve is to maintain the competencies to perform three prioritized functions: 1) Maritime Homeland Security, 2) Domestic and expeditionary support to National Defense; and 3) Response to and recovery of domestic, natural or man-made, disasters.

Foremost, the Coast Guard Reserve must be ready for call-up at any time to provide surge capacity during such contingencies. Training, including normal drill periods and two-week annual active duty, focuses on building and honing the skills and knowledge required for these mobilization duties. Secondly, by virtue of full integration into shore-based units, reservists are available as an augmentation force for the continuum of traditional Coast Guard missions. Their employment in day-to-day operations is structured to complement mobilization readiness requirements.

The Coast Guard Selected Reserve is staffed at 8,100 personnel, which constitutes nearly 20 percent of the uniformed Coast Guard strength.

Reserve staffing for National Defense contingency operations is shown in the table below.

Unit Type (number of units)	Officers		Enlisted	
	Active	SELRES	Active	SELRES
Port Security Unit (8)	8	96	40	1,024
Naval Coastal Warfare Squadron (6)	0	54	0	60
Naval Coastal Warfare Group (2)	2	4	0	8
Joint Reserve Unit (4)	0	43	0	18
Deployable Operations Group (1)	59	6	21	3
Grand Total	69	203	61	1,113

## **2. Status of Equipment**

### **a. Equipment On-hand**

*Table 1* identifies the major equipment inventory for FY 2009–2011. The AC manages all equipment for the Coast Guard Total Force.

### **b. Average Age of Major Items of Equipment**

As specified in *Table 2*, the average age of SELRES equipment is 9 years or less.

### **c. Compatibility of Current Equipment with AC**

The Transportable Port Security Boats (TPSBs) are operated only by the PSUs due to their unique mission; however, the communications and navigation packages are the same as the ones used by the AC.

### **d. Maintenance Issues**

None. Units maintain an adequate preventative maintenance schedule.

### **e. Modernization Programs and Shortfalls**

None. The program maintains equipment compatibility with DoD and Coast Guard AC counterparts.

### **f. Overall Equipment Readiness**

Overall Equipment readiness is good.

### **g. Summary/Conclusion**

There are no major equipment status issues to date.

## **B. Changes Since Last NGRER**

In 2008, the Coast Guard Deployable Operations Group (DOG) was established. The DOG aligns all Coast Guard deployable, specialized forces under a single, unified command headed by Rear Admiral Thomas F. Atkin.

## **C. Future Years Program (FY 2009–FY 2011)**

### **1. FY 2011 Equipment Requirements**

Combatant Commander contingency plans validate requirements for deployable Coast Guard units. The Coast Guard has one Mobile Support Unit (MSU) with two detachments (MSU1 and MSU2) augmented by RC personnel. The MSU is currently a deployable unit within the Engineering Logistics Command.

### **2. Anticipated New Equipment Procurements**

Equipment is currently adequate to support Reserve training at this period of time. We do not foresee a need for additional equipment.

### **3. Anticipated Transfers from AC to RC**

None.

### **4. Anticipated Withdrawals from RC Inventory**

None.

### **5. Remaining Equipment Shortages and Modernization Shortfalls at the End of FY 2011**

#### **a. Funding**

The USCGR training budget has increased at a rate similar to the AC budget and appears to be adequate to meet projected requirements through FY 2011.

#### **b. Personnel**

Currently the Coast Guard is in the process of:

- Designing the Reserve Forces Readiness System organization and developing a comprehensive implementation plan to achieve a smooth and successful organizational change to a Full Operating Capability (FOC) Coast Guard Reserve Forces Readiness System organization in coordination and alignment with other Coast Guard Strategic Transformation Efforts (STEs).
- Performing a Manpower Requirements Analysis to validate or refine the existing standards that staff the RC mission-support system. The Coast Guard chartered a Manpower Requirements Determination (MRD) Enterprise Development Team and provided operating procedures and initial guidance to create an MRD enterprise to increase our ability to account for resources within the Coast Guard Business Intelligence (CGBI). Working with these systems and others within the CGBI, the project team is directed to develop a systematic approach to measuring workload consumption (to include AC and RC human capital) which will ultimately provide senior leadership with a staffing logic that leads to defensible manpower requirements and unambiguous staffing standards.
- Based on the outcome of the MRD and desired rating pyramid structure, developing a Coast Guard policy statement that provides a methodology for determining the resources (AC, RC, civilian, auxiliary, and contractor) required to respond to contingencies.

#### **c. Equipment**

Equipment is currently adequate to support Reserve training.

### **D. Summary**

The Coast Guard RC is on the leading edge of Coast Guard transformation, providing surge capability and using its adaptability to serve the Coast Guard well, now and into the future. The Coast Guard Reserve is a prime example of how the Coast Guard examined its processes and changed to provide better service to the American public, DHS, DoD, and other agencies. As the Coast Guard is called upon to leverage their traditional competencies and multi-mission assets in

support of a broader range of threats, it is the Coast Guard's intention to adapt to our new operating environment and continue to develop and deploy the tools needed by our RC to be effective.

### **1. Funding**

The Coast Guard does not routinely receive funding through the NGREA; however, the Service continues to receive sufficient budgetary appropriation to support Reserve training and readiness through the DHS.

### **2. Personnel**

During FY 2007, the Coast Guard Reserve further refined its policy statement. RC training will focus on building and honing the skills and knowledge required for these mobilization duties. The promulgation of the Commandant's Intent, which clearly describes the organization's strategic policy, lays the foundation and ensures organizational alignment for the future.

### **3. Equipment**

Equipment is currently adequate to support Reserve training. Planning for additional military equipment to use in combat zones is ongoing. Furthermore, recapitalization of MSU equipment that is being maintained beyond the end of its planned life cycle, most notably, unit vehicles and trailers, continues.

The Joint Strategic Capabilities Plan and Combatant Commander Operational Plans call for the Coast Guard to support the operation of two complete patrol boat squadrons. The Coast Guard currently maintains one MSU with two detachment capabilities within the Engineering Logistics Center, which is capable of supporting two patrol boat squadrons. The Coast Guard continues to evaluate the requirement to increase future MSU capability.

**USCGR**

Table 1

**Consolidated Major Item Inventory and Requirements**

*NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve component. Unit cost values are in dollars.*

Nomenclature	FY 2009 Unit Cost	Begin FY 2009 QTY O/H	Begin FY 2010 QTY O/H	Begin FY 2011 QTY O/H	End FY 2011 QTY O/H	End FY 2011 QTY REQ
<b>PORT SECURITY UNITS</b>						
25' TRANSPORTABLE PORT SECURITY BOAT (6 per unit)	\$180,000	54	54	54	54	54
175HP OUTBOARD MOTOR (2 per boat/6 total spares)	\$10,000	162	162	162	162	162
VEHICLE, F350 PICKUP (2 per unit)	\$45,000	16	16	16	16	16
VEHICLE, F350 12-PASSENGER VAN (1 per unit)	\$50,000	7	8	8	8	8
VEHICLE, F550 STAKEBED (1 per unit)	\$50,000	8	8	8	8	8
PRC-117F RADIO, TRI-BAND (1 per boat/1 total spare)	\$45,000	64	64	64	64	64
PRC-117F RADIO, TRI-BAND, BASE (2 per unit)	\$45,000	18	18	18	18	18
PSU EQUIPMENT PACKAGE	\$1,750,000	8	8	8	8	8
<b>MOBILE SUPPORT UNITS</b>						
TRAILER, CONNEX BOX	\$30,000	23	23	23	23	23
TRUCK, PICK-UP	\$45,000	2	2	2	2	2
TRUCK, STAKEBED	\$50,000	4	4	4	4	4
TRUCK, TRACTOR TRAILER	\$105,000	2	2	2	2	2
FORKLIFT, 10,000 LB	\$20,000	1	1	1	1	1
GENERATOR SET 160KW & SPARE PARTS KIT	\$23,000	2	2	2	2	2
WELDER, GAS POWERED	\$3,000	1	1	1	1	1

\* The AC manages all equipment for the Coast Guard Total Force.

# USCGR

Table 2

## Average Age of Equipment

*NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2008.*

Nomenclature	Average Age	Remarks
<b>PORT SECURITY UNITS</b>		
25' TRANSPORTABLE PORT SECURITY BOAT (TPSB)	3-4	New TPSBs were acquired for all PSUs and CG Special Missions Training Center in 2003 - 2004
175HP OUTBOARD MOTOR	4	
VEHICLE, F350 PICKUP	8	
VEHICLE, F350 12-PASSENGER VAN	8	
VEHICLE, F550 STAKEBED	9	
PRC-117F RADIO, TRI-BAND	3	

**USCGR**

Table 3

**Service Procurement Program - Reserve (P-1R)**

*NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2009 President's Budget Submission. All values are costs in dollars, and ammunition procurements have been excluded. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2009 would be expected to arrive in RC inventories in FY 2010 or FY 2011.*

<b>Nomenclature</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>Remarks</b>

**Table 3 not applicable for USCGR**

**National Guard and Reserve Equipment Appropriation (NGREA) Procurements**

*NOTE: This table identifies the dollar value of equipment originally programmed to be procured with the National Guard and Reserve Equipment Appropriation (NGREA). These funds are available for a three-year period from the year of appropriation. Deliveries of procured equipment normally take one to two years from date of procurement before they arrive in the inventory; e.g., items procured in FY 2008 would be expected to arrive in RC inventories in FY 2009 or FY 2010. All values are costs in dollars.*

Nomenclature	FY 2006	FY 2007	FY 2008	Remarks

**Table 4 not applicable for USCGR**

**Projected Equipment Transfer/Withdrawal Quantities**

*NOTE: This table portrays the planned equipment transfers (Active to Reserve), withdrawals (-), and decommissioning (-). Transferred equipment is commonly called "cascaded equipment," or equipment that is provided to the RC once the AC receives more modern equipment. Although this table highlights a three-year period, many Services will not know exact quantities of transfers or withdrawals until year of execution, due to the uncertainty of the procurement/delivery cycle of new equipment.*

Nomenclature	Equip No.	FY 2009 Qty	FY 2010 Qty	FY 2011 Qty	Remarks

**Service has no planned transfers or withdrawals for the years FY 2009 thru FY 2011**

**USCGR**

Table 6

**FY 2005 Planned vs Actual Procurements and Transfers**

*NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. FY 2005 is selected as these are the most recent funds to expire. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007. Procurement and NGREA columns reflect cost values in dollars.*

Nomenclature	Equip No.	FY 2005 Transfers (# of items)		FY 2005 Procurements (\$s)		FY 2005 NGREA (\$s)	
		Plan	Actual	Plan	Actual	Plan	Actual

**USCGR had no planned or actual transfers or procurements of major equipment during FY 2005**

**USCGR**

Table 7

**Major Item of Equipment Substitution List**

*NOTE: This table identifies equipment authorized by the Service to be used as a substitute for a primary item of equipment. The table also identifies whether or not the item is able to be deployed in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired item of equipment.*

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2009 Qty	Deployable?	
					Yes	No

**Service Does Not Use Substitution To Satisfy  
Major Item Equipment Requirements**

**USCGR**

Table 8

**Significant Major Item Shortages**

*NOTE: This table provides a RC prioritized (PR) shortage list for major items of equipment required for wartime missions but which are currently not funded in the FYDP. It lists the total quantity required, the total unfunded requirement, the individual item cost, and the cost of the unfunded portion. This data is consistent with other unfunded data submitted by the Service.*

<b>PR</b>	<b>Nomenclature</b>	<b>Total Req'd</b>	<b># Items <sup>1</sup> Short</b>	<b>Item Cost</b>	<b>Total Shortage Cost</b>	<b>Rationale/ Justification</b>
1	Ford Excursion Van, 15 Passenger	8	2	\$40,000	\$80,000	Port Security Units
2	Mobile Support Unit (MSU) TOE	2	1	\$1,259,000	\$1,259,000	MSU #2
<p>1. Shortage items are required for AC recapitalization of outdated equipment. The AC manages all equipment for the Coast Guard Total Force.</p>						

## **Appendix A**

### **Report Requirements, Terminology, and Definitions**

#### **I. Report Requirements**

##### **A. Overview of Statutory Requirement**

The DoD Authorization Act of 1982 (Public Law 97-86) established the requirement for DoD to provide an annual report to the Congress, by February 15th of each year, on the status of National Guard and Reserve equipment; hereafter referred to as the NGRER. The Goldwater-Nichols DoD Reorganization Act of 1986 amended Title 10 of the U.S. Code placing the reporting requirement under Section 115(b). The Congress in Public Law 103-337 transferred reporting requirements to a new Subtitle E, Reserve Components, Part I, Chapter 1013, which was re-designated Section 10541. In compliance with the FY 1993 National Defense Authorization Act (NDAA), Section 1134, Title XI, the NGRER was expanded to include a description of the current status of equipment incompatibility between the AC and RC, the effect of that level of incompatibility, and the plan to achieve full compatibility. Finally, the FY 2008 NDAA, Sections 351(a), 351(c)(1), and 1826 added additional National Guard (NG) equipment reporting requirements to the NGRER. Sections 351(a) and 351(c)(1) added the requirement for an assessment of the extent to which the National Guard possesses the equipment required to support operations in an emergency or major disaster. Section 1826 required a statement of the accuracy of past NG equipment inventory projections, and a certification from the Chief of the National Guard Bureau setting forth the inventory of equipment items that were due to be procured in the preceding fiscal year, but were not received.

This report is prepared by the Office of the Assistant Secretary of Defense for Reserve Affairs with the assistance of the Department of the Army, the Department of the Navy, the Department of the Air Force, and the Department of Homeland Security (U.S. Coast Guard).

##### **B. Current Law**

The section below is an excerpt from Title 10, U.S. Code, Section 10541. Changes required by the FY 2008 NDAA are highlighted.

###### *National Guard and Reserve Component Equipment: Annual Report to Congress*

*(a) The Secretary of Defense shall submit to the Congress each year, not later than February 15, a written report concerning the equipment of the National Guard and the reserve components of the armed forces for each of the three succeeding fiscal years.*

*(b) Each report under this section shall include the following:*

*(1) Recommendations as to the type and quantity of each major item of equipment which should be in the inventory of the Selected Reserve of the Ready Reserve of each reserve component of the armed forces.*

*(2) A statement of the quantity and average age of each type of major item of equipment which is expected to be physically available in the inventory of the Selected Reserve of the Ready Reserve of each reserve component as of the beginning of each fiscal year covered by the report.*

*(3) A statement of the quantity and cost of each type of major item of equipment which is expected to be procured for the Selective Reserve of the Ready Reserve of each reserve component from commercial sources or to be transferred to each such Selected Reserve from the active-duty components of the armed forces.*

*(4) A statement of the quantity of each type of major item of equipment which is expected to be retired, decommissioned, transferred, or otherwise removed from the physical inventory of the Selected Reserve of the Ready Reserve of each reserve component and the plans for replacement of that equipment.*

*(5) A listing of each major item of equipment required by the Selected Reserve of the Ready Reserve of each reserve component indicating -*

*(A) the full war-time requirement of that component for that item, shown in accordance with deployment schedules and requirements over successive 30-day periods following mobilization;*

*(B) the number of each such item in the inventory of the component;*

*(C) a separate listing of each such item in the inventory that is a deployable item and is not the most desired item;*

*(D) the number of each such item projected to be in the inventory at the end of the third succeeding fiscal year; and*

*(E) the number of non-deployable items in the inventory as a substitute for a required major item of equipment.*

*(6) A narrative explanation of the plan of the Secretary concerned to provide equipment needed to fill the war-time requirement for each major item of equipment to all units of the Selected Reserve, including an explanation of the plan to equip units of the Selected Reserve that are short of major items of equipment at the outset of war.*

*(7) For each item of major equipment reported under paragraph (3) in a report for one of the three previous years under this section as an item expected to be procured for the Selected Reserve or to be transferred to the Selected Reserve, the quantity of such equipment actually procured for or transferred to the Selected Reserve.*

*(8) A statement of the current status of the compatibility of equipment between the Army reserve components and active forces of the Army, the effect of that level of incompatibility on combat effectiveness, and a plan to achieve full equipment compatibility.*

*(9) (Added by FY 2008 NDAA, Sections 351(a) and 351(c)(1)) An assessment of the extent to which the National Guard possesses the equipment required to perform the responsibilities of the National Guard pursuant to sections 331, 332, 333, 12304(b) and 12406 of this title in response to an emergency or major disaster (as such terms are defined in section 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C 5122)). Such assessment shall –*

*(A) identify any shortfall in equipment provided to the National Guard by the Department of Defense throughout the United States and the territories and possessions of the United States that is likely to affect the ability of the National Guard to perform such responsibilities;*

*(B) evaluate the effect of any shortfall on the capacity of the National Guard to perform such responsibilities in response to an emergency or major disaster that occurs in the United States or a territory or possession of the United States; and*

*(C) identify the requirements and investment strategies for equipment provided to the National Guard by the Department of Defense that are necessary to plan for a reduction or elimination of any such shortfall.*

*(c) Each report under this section shall be expressed in the same format and with the same level of detail as the information presented in the annual Future Years Defense Program Procurement Annex prepared by the Department of Defense.*

*(d) (Added by FY 2008 NDAA, Section 1826) Each report under this section concerning equipment of the National Guard shall also include the following:*

*(1) A statement of the accuracy of the projections required by subsection (b)(5)(D) contained in earlier reports under this section, and an explanation, if the projection was not met, of why the projection was not met.*

*(2) A certification from the Chief of the National Guard Bureau setting forth an inventory for the preceding fiscal year of each item of equipment –*

*(A) for which funds were appropriated;*

*(B) which was due to be procured for the National Guard during that fiscal year; and*

*(C) which has not been received by a National Guard unit as of the close of that fiscal year.*

## **II. Report Objective**

Based upon the law, the Office of the Assistant Secretary of Defense for Reserve Affairs (Materiel & Facilities), with concurrence from all Services, has identified the following objectives:

- Provide the Services' plan to equip their Reserve forces in a time of constrained DoD budgets.
- Concentrate on FY 2009 to 2011 RC requirements, procurements and changes.
- Provide an overview of current RC equipment from three perspectives:
  - current status of equipment on-hand.
  - future year equipment procurements for FY 2009–FY 2011
  - remaining shortfall for FY 2012 and beyond.
- Focus primarily on major items of equipment.

### **III. Report Contents**

#### **A. Overview (Chapter 1)**

Chapter 1 presents a composite DoD perspective on National Guard and Reserve equipment and serves as the executive summary of the report.

#### **B. Service Narratives and Data Tables (Chapters 2–6)**

Chapters 2 through 6 present the status of each Service and their respective RC in terms of RC equipping policies and methodologies. Each chapter contains a Service and RC overview, and includes a discussion of current equipment status, future equipment procurements, and remaining shortfalls and unfunded requirements. Each chapter includes a review of the current status of equipment compatibility and interoperability between the AC and the RC of each Service, the effect of that level of compatibility/interoperability, and a plan to achieve full compatibility/interoperability.

RC data tables for each Service contain specific information on major items of equipment selected for review in this report and are placed at the end of each RC narrative section. The NGRER articulates data in eight tables (*Tables 1-8*) for each RC. In a situation where data tables are not applicable to a particular RC, a blank page has been inserted to note that table data is not applicable. The “Data Table Explanation” at the end of this section defines the data contained in *Tables 1-8*.

### **IV. Terminology and Definitions**

Major Items of Equipment include aircraft, tanks, ships, trucks, engineer equipment and major items of support equipment. These items normally will include large dollar value requirements, critical RC shortages, Service and NGREA procured items, and any RC specific item which the Chief of the specific RC wishes to highlight.

Required Quantity is the total number of an item required to be on-hand or available to RC units to go to war and accomplish their mission(s). This includes requirements for war reserve and other stocks. The simplified term “requirement,” as used in this report, is synonymous with “full wartime requirement,” and satisfies the requirement in Title 10 to provide a “recommendation” as to the type and quantity of equipment needed in RC inventories.

On-Hand Quantity is the equipment physically on-hand in RC or AC units or in war reserve and other stocks specifically designed for wartime use by the RC or AC.

Deployable Item is an item which, considering its suitability, operability, compatibility and supportability, will provide an expected degree of mission success sufficient to warrant its wartime operational employment.

Compatibility/Interoperability denotes the capability of two items of equipment to operate together in the same environment without interfering with one another and without degrading function or unit capability.

Substitute Item is not the most desired item but based upon its capability can be employed in wartime in lieu of a combat essential required item of equipment. It may not function at the same level of capability as the item in the AC for which it is the substitute.

Equipment Shortage (Shortfall) is the difference between the quantity required and the quantity on-hand, excluding substitute items and excess quantities beyond the required quantity.

Modernization Shortfall is the difference between the required quantity of the most modern item and the on-hand quantity of that item. Modernization shortfalls are not necessarily equipment shortages as most Services substitute older versions of an item for the most modern item. Therefore, modernization shortfalls are shortages of the most modern item only, and can have a significant effect upon compatibility and interoperability.

## **V. Data Tables**

### **A. Table Contents**

A separate set of Data Tables (*Tables 1-8*) is provided in Chapters 2 through 6 for each RC. These tables contain the required information relative to major items of equipment identified in the report. The following list identifies the separate data tables that are included in the report for each RC.

- Table 1: Consolidated Major Item Inventory and Requirements (This is an all-inclusive table while other tables are subsets of *Table 1*.)
- Table 2: Average Age of Equipment
- Table 3: Service Procurement Program - Reserve (P-1R)
- Table 4: National Guard and Reserve Equipment Appropriation (NGREA) Procurements
- Table 5: Projected Equipment Transfer/Withdrawal Quantities
- Table 6: FY 2005 Planned vs Actual Procurements and Transfers
- Table 7: Major Item of Equipment Substitution List
- Table 8: Significant Major Item Shortages

### **B. Table Explanations**

The following paragraphs provide an explanation of the data table columns and data criteria by Table.

**Table 1: Consolidated Major Item Inventory and Requirements.** This table provides a comprehensive list of selected major items of equipment the RC chooses to highlight, by providing key administrative data, on-hand inventories and wartime requirements.

RC is the specific Reserve or National Guard entity, i.e., ARNG, USAR, USMCR, ANG, AFR, USNR or USCGR.

Nomenclature is the description or common name of the item of equipment.

Equipment Number is the individual Service equipment identification code: Line Item Number (LIN) for the Army; Table of Authorized Materiel Control Number (TAMCN) for the Marine Corps; Equipment Cost Code (ECC) for Navy engineering items; and National Stock Number (NSN) for the Air Force.

Cost is the FY 2009 procurement cost per unit. If an item is no longer being procured, the inflation adjusted cost from the last procurement is shown. If an item is programmed for initial procurement beyond FY 2009, the data table depicts the projected unit cost at the time of procurement.

Quantity On-hand (QTY O/H) is the actual/projected item count for a particular item of equipment at a specified time.

Quantity Required (QTY REQ) is the authorized wartime requirement for a given item of equipment.

**Table 2: Average Age of Equipment.** This table is a subset of *Table 1* and highlights the average age of selected items of equipment.

Average Age is the calculated age of a given item of equipment. Since equipment is normally procured over several years, this figure provides an average age of the fleet at the start of FY 2008.

**Table 3: Service Procurement Program - Reserve (P-1R).** This table highlights items of equipment, which the Service intends to procure for their RC. The source of this data is the P-1R exhibit to the President's Budget.

**Table 4: National Guard and Reserve Equipment Appropriation (NGREA) Procurements.** This table highlights the items, which the RC plan on procuring with miscellaneous NGREA funds. Since these funds are available for three years, this table highlights those items in the current procurement cycle.

**Table 5: Projected Equipment Transfer/Withdrawal Quantities.** This table portrays the planned equipment transfers (AC to RC), withdrawals, and decommissioning. Transfers are commonly called "cascaded" equipment or equipment that is provided to the RC once the AC receives more modern equipment items. Although this table highlights a three-year period, many Services do not know exact quantities of transfers or withdrawals until year of execution due to the uncertainty of the procurement/delivery cycle of new equipment.

**Table 6: FY 2005 Planned vs Actual Procurements and Transfers.** This table compares what the Service planned to procure and transfer to the RC in FY 2005 with actual procurements and transfers. Since the procurement cycle is normally one to two years from funding to delivery, this table identifies only what has been delivered through the end of FY 2007.

Planned Quantity is the item quantity the Service programmed to deliver to the RC as part of the budgeting process.

Actual Quantity is the item quantity the Service actually delivered or has in the procurement cycle to deliver to the RC.

**Table 7: Major Item of Equipment Substitution List.** A list of equipment authorized by the Service to be used as a substitute for a primary item of equipment. This table also identifies whether this substitute item is suitable for deployment in time of war.

Nomenclature (Required Item/Substitute Item), see *Table 1* description for nomenclature.

Equipment Number (Required Item/Substitute Item), see *Table 1* description for equipment number.

**Table 8: Significant Major Item Shortages.** The top ten items of equipment and modernization/upgrades, which are not funded in the FY 2009–2013 FYDP, are listed in this table in priority order. If additional funds were to become available, the RC would apply those funds to the highest priority item on this list.



## Appendix B

### National Guard Readiness for Emergencies and Major Disasters

#### I. FY 2008 National Defense Authorization Act Changes to the NGRER

The FY 2008 National Defense Authorization Act (NDAA), Sections 351(a), 351(c)(1), and 1826, added new National Guard equipment reporting requirements for the annual NGRER. This appendix describes the new reporting requirements mandated by the FY 2008 NDAA and provides the National Guard Bureau response to each of the NDAA Section requirements.

The following CNGB memorandum addresses the CNGB certification required by the Section 1826 of the FY 2008 NDAA.

	<b>DEPARTMENTS OF THE ARMY AND THE AIR FORCE</b> NATIONAL GUARD BUREAU 1411 JEFFERSON DAVIS HIGHWAY ARLINGTON, VA 22202-3231	14 FEB 2008
NGB-ZA		
<p>MEMORANDUM THRU Logistics Directorate, The Joint Staff</p> <p>FOR Deputy Assistant Secretary of Defense for Reserve Affairs (Materiel &amp; Facilities)</p> <p>SUBJECT: National Defense Authorization Act (NDAA) 2008 Language for the National Guard and Reserve Equipment Report (NGRER)</p> <p>1. Reference OSD/RA memorandum dated 22 January 2008, Subject: National Defense Authorization Act (NDAA) 2008 Language for the National Guard and Reserve Equipment Report (NGRER) (enclosure 1).</p> <p>2. The FY 08 NDAA identifies additional reporting requirements to supplement the information previously provided for the NGRER. As required by Section 351, included is an assessment of the extent to which the National Guard possesses the equipment required to support operations in response to an emergency or major disaster (enclosure 2). And as required by Section 1826, an assessment of the accuracy of equipment procurement projections and inventory (enclosure 3).</p> <p>3. The addition of the new reporting requirements will require the National Guard to work the Army and Air Force to create new processes and procedures in order to fully comply. In this first report, the information is as complete as possible at the macro level.</p>		
Encl: as stated	 H Steven Blum Lieutenant General, USA Chief, National Guard Bureau	
CF: Assistant Secretary of the Army (Manpower and Reserve Affairs) Assistant Secretary of the Air Force (Manpower and Reserve Affairs)		

## **II. National Guard Readiness for Emergencies and Major Disasters**

### **A. FY 2008 NDAA, Sections 351 Language**

FY 2008 NDAA, Sections 351(a) and 351(c)(1), “Reports on National Guard Readiness for Emergencies and Major Disasters,” added the requirement for an assessment of the extent to which the National Guard possesses the equipment required to support operations in an emergency or major disaster. The following language is an excerpt from Title 10, U.S. Code, Section 10541, as amended by the FY 2008 NDAA, Sections 351(a) and 351(c)(1):

*(9) (Added by FY 2008 NDAA, Sections 351(a) and 351(c)(1)) An assessment of the extent to which the National Guard possesses the equipment required to perform the responsibilities of the National Guard pursuant to sections 331, 332, 333, 12304(b) and 12406 of this title in response to an emergency or major disaster (as such terms are defined in section 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C 5122)). Such assessment shall—*

*(A) identify any shortfall in equipment provided to the National Guard by the Department of Defense throughout the United States and the territories and possessions of the United States that is likely to affect the ability of the National Guard to perform such responsibilities;*

*(B) evaluate the effect of any shortfall on the capacity of the National Guard to perform such responsibilities in response to an emergency or major disaster that occurs in the United States or a territory or possession of the United States; and*

*(C) identify the requirements and investment strategies for equipment provided to the National Guard by the Department of Defense that are necessary to plan for a reduction or elimination of any such shortfall.*

### **B. National Guard Bureau Response**

#### **1. Overview**

The equipment used by the National Guard “to perform its responsibilities in an emergency or major disaster” come from three broad sources: dual-use equipment provided by the Army, dual-use equipment provided by the Air Force; and specialty GOTS/COTS equipment, acquired via a variety of DoD sources, to meet unique task, conditions or standards for operating in the homeland.

It is DoD and NGB policy that, to the extent practicable, emergency or major disaster functions will be performed using dual-use equipment. It is also NGB policy to generate emergency or major disaster forces, wherever possible, using existing Service units; either individually or in task organized forces built from two or more existing units. Response forces are equipped first with dual-use equipment, and then augmented as necessary with the specialty GOTS/COTS. Dedicated WMD-CST units are the notable exception to this unit approach.

The emergency or major disaster response capabilities are also binned to the NG “Essential 10” for consistent visibility, reporting and management. The Essential 10 capabilities provide for a Joint Force Headquarters for command and control; a Civil Support Team for chemical, biological, and radiological detection; engineering assets; communications; ground transportation; aviation; medical capability; security forces; logistics and maintenance capability.

The following response is organized by these three broad categories: ARNG shortfalls, ANG shortfalls and Joint NG (primarily specialty equipment) shortfalls.

## **2. Army National Guard Equipment (ARNG)**

### **a. ARNG Shortfalls**

The Army's Modified Table of Organization and Equipment (MTOE) is the authorization document that prescribes equipment necessary for a unit to achieve its mission. The Army National Guard leverages MTOE equipment for their dual mission of Homeland Defense (HLD) and Defense Support of Civil Authorities (DSCA). Currently, non-deployed ARNG units report the lowest readiness rating prescribed by Army regulations which is 65 percent or less of EOH. If deployed assets are included in the percentage, the ARNG has 79 percent of its authorized MTOE equipment. At the State level, when counting both MTOE and TDA<sup>1</sup>, only 61 percent of their equipment is available for disaster response.

In order to more accurately assess the HLD/DSCA mission, the ARNG identified specific Line Item Numbers (LINs) of equipment that are Critical Dual Use. Critical Dual Use equipment is essential for both domestic (HLD/DSCA) and warfighting missions. These items are reviewed annually in order to evolve the list to allow for modernized equipment and authorization document updates. The ARNG further assesses capability by assigning these items into the "Essential 10" capabilities. Essential 10 capabilities provide for a Joint Force Headquarters for command and control; a Civil Support Team for chemical, biological, and radiological detection; engineering assets; communications; ground transportation; aviation; medical capability; security forces; logistics and maintenance capability.

Shortfalls within the Critical Dual Use LINs are most pronounced in the transportation and command and control categories. Legacy vehicles such as the M35 and 800/900 series 2.5 ton and 5 ton trucks are part of an aging ARNG transportation fleet. Legacy vehicles are expensive to maintain and prone to mechanical failure. The ARNG is currently short 5,766 FMTVs at a cost of over \$1.6B. Additionally, the ARNG is currently short 19,832 HMMWVs at a cost of over \$4.1B which impacts command and control capability. The Warfighter Information Network-Tactical (WIN-T) is another item for which ARNG is critically short and contributes to the command and control category.

It is critical that Dual Use equipment is brought to high levels of fill to support domestic response. If lower levels are maintained and units are deployed from a State, the Adjutant General and Governor are left with inadequate capability. Although a State can obtain support from an adjoining State through an Emergency Management Assistance Compact, an effective and immediate response to an unforeseen event requires a well-equipped ARNG.

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<sup>1</sup> A Table of Distribution and Allowances (TDA) is an authorization document developed for non-doctrinal units that prescribes the organizational structure and the personnel and equipment requirements of a military unit to perform a mission for which there is no appropriate TOE. A TDA unit is generally not a deploying unit.

## **b. Effects of ARNG Shortfalls**

The ARNG is prepared to respond to predictive emergencies or major disasters with current equipping levels by mitigating risk through established Emergency Management Assistance Compact (EMAC) agreements and other means. Responding to unpredictable and catastrophic events could present a challenge until the ARNG is fully equipped.

Indicators of the strain in the Essential 10 capability shortfalls are seen in annual hurricane season equipment requests. Hurricane prone states request augmentation to on-hand quantities of transportation, communication and engineer equipment to fill authorizations. During the 2007 hurricane season, 2,572 pieces of equipment were loaned, issued or otherwise made available to southern coastal States and islands to mitigate the shortages. This equipment shortfall can be credited to both procurement and mobilization driven shortages.

Shortfalls in equipment can slow the ARNG response to disasters and terrorist incidents in the homeland, as equipment may need to ultimately be brought into an affected area from further away. Improved equipping strengthens readiness for both overseas and homeland missions and improves the capability to train on mission essential equipment.

## **c. ARNG Requirements and Strategies**

The Army's equipping strategy supports modularity and the Reserve Component as an operational force. Succeeding with this strategy requires all components to have standardized MTOEs and the same modern equipment. The ARNG requirement in FY 2013 at the end of this transformation is about \$104.6B based on modernized force structure authorizations. Currently the ARNG has approximately \$52B on-hand. In the FY 2009–2013 budget, the Army has programmed \$28B for ARNG equipment and modernization.

Funding has been increased to procure new equipment for the ARNG; this equipment will have utility for both domestic and war fighting missions. The Army committed to programming a total of \$36.8B FY 2005–FY 2013 from several funding sources, including; Service procurements, Congressional adds, Supplementals, and National Guard and Reserve Equipment Appropriation (NGREA). The ARNG works with the Army to prioritize Army procurements but uses NGREA to fine tune its capabilities largely by prioritizing procurement of critical dual use equipment. The Army objective is to ultimately resource the ARNG to 100 percent of its MTOE requirement for BCTs by FY 2015 and the remained of the force by FY 2019.

Due to the average lag time of 18–24 months between funding and actual delivery of equipment the ARNG is just beginning to see the influx of large quantities of equipment resulting from this increase in funding. The ARNG expects to receive \$14B in equipment during FY 2008–2009. CNGB has proposed that an additional \$13B funding be added to the program through FY 2013 to bring Critical Dual Use LINs to 100 percent EOH. Funding of the Essential 10 capabilities will ensure that the Governors are well equipped to handle future domestic operations.

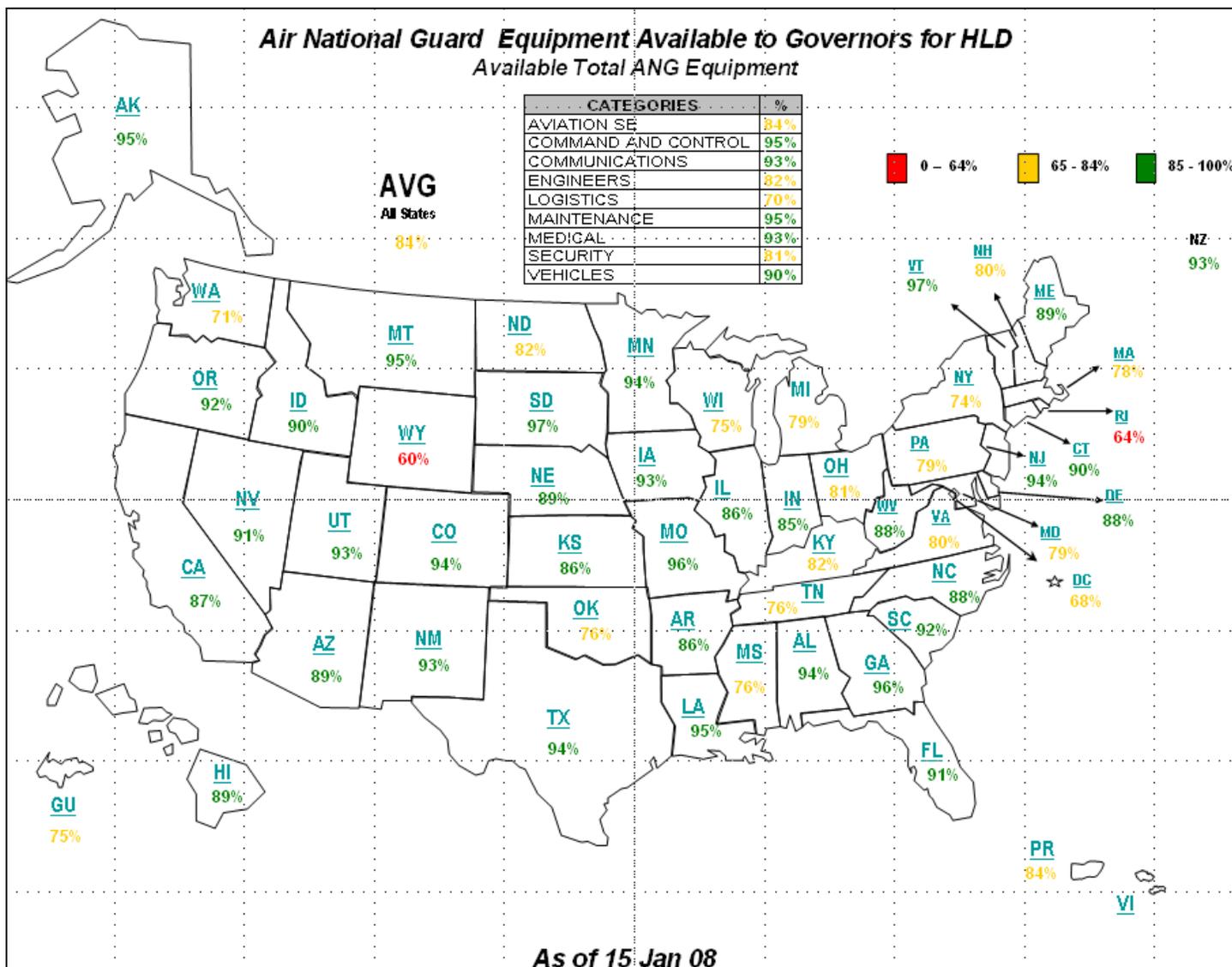
## **3. Air National Guard (ANG)**

### **a. ANG Shortfalls**

The majority of ANG equipment assets may be classified as “dual use”—over 1,700 items may be used to support both Federal and State missions. Recent data (chart below) indicates we are

approximately 16 percent short of our equipment requirements, as calculated from items in-use (456K) versus items authorized (543K).

The graphic below depicts ANG shortfalls in terms of total items required to support our Essential Capabilities, broken out by State.



We have been collecting data in this fashion since mid FY 2008, so we have limited ability to analyze this data from a historical perspective. However, recent data (early FY 2008) indicates an 84 percent fill rate of all equipment—roughly 87,000 items short of our requirement.

**b. Effects of ANG Shortfalls**

We anticipate these shortfalls to cause a minor impact on our ability to respond to an emergency or major disaster, providing stable steady state Federal operations. Of the 16 percent shortfall, most of these items are not critical/mission essential items—these are the items which routinely receive our equipment funding. However, past contingencies indicate an abnormally high usage

of cargo/refueling aircraft during the initial onset of contingency operations. During these times, we have left our HLD missions vulnerable, as we have migrated most equipment/resources to our Federal missions, leaving the shortfalls to impact mainly the State mission.

### **c. ANG Requirements and Strategies**

Air National Guard equipment is funded using both ANG and Air Force appropriations, as well as NGREA additions to our Total Obligation Authority for a given fiscal year. To continually identify requirements, we utilize a system whereby base level personnel enter equipment requirements information into legacy data systems, based on their Federal taskings (to date, State taskings are not as clearly defined/aligned against unit manpower/equipment resources). These legacy databases roll up this information in to higher level database architecture/simulation models which generate aggregated requirements lists. Using these lists, command-level equipment and supply chain managers determine funding requirements, and vet these requirements through the approved Department of Defense Planning, Programming, and Budgeting Execution System (PPBE). Both the ANG and the Air Force, within their separate appropriations, utilize the PPBE to identify funding requirements for ANG Equipment.

Through the PPBE process, to help eliminate our equipment shortfalls, the applicable ANG and AF appropriations have been allocated roughly \$600M throughout the FY 2008–2014 FYDP. Each year, as funding requirements are re-assessed, we re-program resources to further eliminate these shortfalls to the best of our ability. In FY 2007, the ANG appropriation was funded at \$60M, but we added an additional \$8M during the year from another unobligated account to alleviate our equipment shortfalls.

Additionally, during the process of executing our allocated equipment funds, we constantly interact with our Air Force counterparts to re-prioritize this critical funding, to ensure procurement of only our most critical/essential items. This is why, although 16 percent short of our total equipment requirement, we anticipate minimal impact if not fully funded. We do this to ensure that only the most critical items are funded, as the aforementioned system of identifying equipment requirements, and allocating funding poses challenges to equipment managers. As an example, as of January 2008, we require roughly \$500M to fill all of our equipment requisitions. We have been funded in FY 2008 at roughly \$100M. While this appears on the surface that we are only funded at 20 percent, this is actually not the case. Our aforementioned requirements process involving base personnel, database roll-ups, and an 18-24 month time period between funding and procurement/receipt of items, greatly complicates the funding requirements calculations. This \$400M shortfall will either increase or decrease throughout this FY, depending on when old procurements are received, and when new procurements are requisitioned in the data systems.

This process of re-prioritizing equipment requirements takes place throughout the fiscal year, and is the most critical element to our requirements/investment strategy. Without this stringent management, snapshots of current equipment status/requirements could prove greatly misleading.

#### **4. Joint National Guard (NG) Equipment**

##### **a. Joint NG Shortfalls**

The Weapons of Mass Destruction (Civil Support Teams) (WMD(CST)) have a limiting factor of non-redundant Commercial-Off-The-Shelf (COTS) Chemical, Biological, Radiological, Nuclear (CBRN) equipment for monitoring and detection down-range and analysis. Some critical COTS equipment is fielded to the CSTs on a single piece basis. This creates a potential single point of failure for a CST mission. Failure of any of these equipment items would result in a lessening of the team's capability until replacements or "floats" could be obtained.

The CBRNE Emergency Response Force Packages (CERFPs) have a potential limiting factor in the dual-use Small Portable Expeditionary Aeromedical Rapid Response (SPEARRE) gear associated with the Medical element. The current Air Force allowance standard in the Defense Medical Logistics Supply System (DMLSS) is significantly different than the one in effect when the first CERFPs were organized and equipped. These allowance standards are continually adjusting to changes in quality control or safety recalls, obsolescence or lack of continued manufacturer support. So, while the SPEARR mission has not changed, the teams must continually assess the changing allowance standard to identify and mitigate potential mission impacts.

CERFPs require additional interoperable, handheld radios which were funded in the FY 2007 Emergency Supplemental, and are in the process of being fielded.

The Joint Incident Site Communications Capability (JISCC) packages, which provide the NG with deployable, interoperable communications and information sharing during emergency or major disaster within the domestic environment, are operating under two limiting factors. The first limiting factor is the need for secure communications and JTF-State expansion modules. The FY 2007 NGREA funded these two upgrades for ten JISCC packages. This leaves 44 States without these capabilities and a configuration issue when managing multi-state response. The second is the 14 prototypes fielded in 2004 and 2005 during verification of the JISCC concept. ANG funded equipment upgrades for these prototypes to JISCC Block 1 configuration in 2006. NGB needs to bring them up to the new standard Block 2 configuration.

##### **b. Effects of Joint NG Shortfalls**

The CST and SPEARR issues are limiting factors, with no specific effects unless a failure occurs.

The 17 CERFPs are still dependent on external sources for interoperable, handheld communications with other responders until the procurement is complete.

The JISCC issues are also limiting factors, not specific shortfalls. However, the limiting factors associated with the 44 secure communications and JTF-State expansion modules are significant. These capability needs were identified during responses to hurricanes Katrina and Rita in 2005. The lack of secure communications in 44 states can slow coordination on sensitive issues such as law enforcement and security for critical infrastructure as well as integration with Title 10 forces. The JTF-State expansion module increases the staff supported from 15 to 80 users; a significant limitation in some scenarios. Other limiting factors deal with configuration and training

management for a small resource base with multiple configurations. They also preclude NG compliance with USNORTHCOM Communications Extension Standards Guidance and Telecommunications Rules of Engagement, dated 27 July 2006.

### **c. Joint NG Requirements and Strategies**

Specialty GOTS/COTS for emergency or major disaster response is funded using a combination of ARNG, ANG, Army and Air Force Appropriations, DoD-wide Appropriations (e.g., the Chemical and Biological Defense Program (CBDP)) as well as ANG and ARNG NAREA.

NGB continues to work with DoD to pursue modernization for CSTs as technology evolves, both within the Service appropriations when possible and within the DoD appropriations (CBDP). An objective of any modernization strategy would be to mitigate or eliminate these single failure points.

NGB will purchase against new SPEARR allowance standards as mission dictates and funding allows.

NGB is executing FY 2007 Emergency Supplemental NAREA funds to fill the CERFPs with critical interoperable communication, the hand-held XTS-5000 radios. NAREA funds will be executed by end of Feb to fill this shortage. We anticipate delivery of the XTS 5000 radios to 17 CERFPs by Jul 08.

NGB is executing the FY 2007 NAREA for the 10 JISCC secure communications and JTF-State expansion modules. The remaining 44 sets are on the NGB unfunded priority list.

## **III. Additional Reporting Requirements Relating to National Guard Equipment**

### **A. FY 2008 NDAA, Section 1826 Language**

FY 2008 NDAA, Section 1826, "Additional Reporting Requirements Relating to National Guard Equipment," added the requirements for a statement of the accuracy of past NG equipment inventory projections and a certification from the Chief of the National Guard Bureau setting forth the inventory of equipment items that were due to be procured in the preceding fiscal year, but were not received. The following language is an excerpt from Title 10, U.S. Code, Section 10541, as amended by the FY 2008 NDAA, Section 1826:

*(d) (Added by FY 2008 NDAA, Section 1826) Each report under this section concerning equipment of the National Guard shall also include the following:*

*(1) A statement of the accuracy of the projections required by subsection (b)(5)(D) contained in earlier reports under this section, and an explanation, if the projection was not met, of why the projection was not met.*

*(2) A certification from the Chief of the National Guard Bureau setting forth an inventory for the preceding fiscal year of each item of equipment—*

*(A) for which funds were appropriated;*

*(B) which was due to be procured for the National Guard during that fiscal year; and*

*(C) which has not been received by a National Guard unit as of the close of that fiscal year.*

## **B. National Guard Bureau Response**

### **1. Overview**

The National Guard Bureau acknowledges the need to validate Army and Air Force procurement output. During the past two years, both the Army and the Air Force have made significant improvements to the processes and automation systems associated with equipment procurement. These systems now provide good accountability at the macro level, but determining the source of funding—the year of the funding and whether equipment was purchased with the baseline budget versus emergency supplemental appropriations—is not available.

At present neither the Army nor the Air Force has the capability to track with certainty the degree to which funding indicated in the Procurement Programs - Reserve Component (P-1R) budget exhibit has in fact resulted in the delivery of appropriate amounts of equipment or equipment modifications. As a result, a certified inventory, per se, is not possible.

The National Guard Bureau will request the Army and the Air Force to continue to improve their processes and automation systems to provide complete transparency and accountability of funding as it is converted into equipment and delivered to Army National Guard (ARNG) and Air National Guard (ANG) units.

### **2. Army National Guard**

In the interim, the ARNG assessed the accuracy of the FY 2005 projections by assuming that all equipment received in FY 2007 was due to FY 2005 funding. Overall, the results are satisfactory and Army's projected future distributions exceed what was promised. However, there are four items of concern regarding HMMWVs, semi-trailers, heavy tactical vehicles, and engineer equipment.

The impact of a significant number of equipment items for which the actual inventory fell short of projection is offset because the Army began delivery of a more modern item. For example, since the FY 2005 budget submission was developed, the Army has emphasized production of the M4 Carbine over continuing to procure the M16A2. The growth in the M4 inventory more than compensates for reduced quantities of the older weapon. Similarly, the AN/PVS-7 night vision goggle distribution was overstated in the forecast but is partially offset by increases in the issue of the new AN/PVS-14. This is also the case of the AN/PAS series of thermal sights that displaced production and deliveries of earlier night vision sights. Finally, the production of the earlier "A" model SINCGARS radios which did not meet the inventory forecast has been replaced by the data capable "F" model versions, which were not placed on the table when it was developed.

A failure to meet forecasted levels of heavy combat systems can also be rationalized. Nearly every system fell short of the projected on-hand quantities; however ARNG force structure has changed by reducing armor and mechanized forces in favor of infantry and other units. Finalization of force structure decisions has significantly reduced all heavy combat force requirements such as M1A1 tanks, Bradley Fighting vehicles and heavy artillery systems. Modernization of the ARNG's remaining heavy forces is on schedule.

There are four cases of non-delivery that are of importance—HMMWVs, semi-trailers, heavy tactical vehicles, and engineer equipment have implications for domestic response, training, and readiness.

The deliveries of HMMWVs fell well short of FY 2005 projections. First, the Army shifted production from legacy unarmored versions such as M966 TOW carriers and M998 cargo/troop carrier to a new version that is more armor capable. Many of these up-armored HMMWVs were then redirected to support the surge of forces into Iraq in FY 2007. Thus, the most modern HMMWVs with associated weapons and high technology devices were committed to deploying units and not distributed to ARNG units. As a trade-off, the Army provided additional HMMWVs from the recapitalization program. The ARNG was left with significant shortfalls from projected deliveries.

The ARNG also experienced shortfalls in the projected quantities of semitrailers, heavy tactical vehicles to haul fuel and cargo, and engineer equipment that are essential to the ARNG's dual mission. The increase of equipment deliveries in the next two years will yield considerable progress toward improving the ARNG equipping posture.

Overall, many FY 2005 projected quantities of equipment were not received in FY 2007 - with mixed impacts. Most were acceptable, since the Army compensated the shortfall with either more modern equipment or recapitalized equipment instead of new items. However, four items—HMMWV, semi-trailers, heavy tactical vehicles, and engineer equipment—do have impact on the ARNG's ability to respond to HLD/DSCA and train for the war fight.

### **3. Air National Guard**

The manner in which the ANG identifies funding requirements for future years makes it difficult if not impossible to provide a statement of accuracy of the projections required by subsection (b) (5)(D) in earlier reports under this section. Upon approval of the President's budget, the funding appropriated to procure equipment does not correlate directly to individual equipment items. Once appropriated, these resources are carefully aligned against the most critical equipment requirements throughout the year of execution in a legacy database system which updates daily, upon receipt of procured items and/or upon new equipment requirement entries by ANG personnel. With the new requirement in place to provide this statement of accuracy for future years, we will endeavor to generate periodic reports from our systems which will assist in tracking individual items through the procurement process.

Also, the manner in which the ANG increases capability through Service procurement funding makes it difficult if not impossible to provide a certified inventory in that case. In many cases, procurement funds buy modernization or modification of existing end items rather than procurement of new end items. As a consequence, it's not feasible to certify an inventory precisely in the manner prescribed by the new law in Title 10 USC 10541(d) (2).

In the interim, the National Guard Bureau can report that in FY 2007, it purchased 9,195 items using National Guard and Reserve Equipment appropriations, for a total of \$68M. Additional service procurements from the Air Force appropriation garnered an additional \$46M of support equipment for the ANG in FY 2007.

Since the ANG re-prioritizes equipment throughout each year of execution, it is difficult, using our current tracking processes, to discern which equipment was “due to be procured” during FY 2007. As noted above, the ANG procured an additional \$8M in equipment items in FY 2007 using execution year money over and above the \$60M ANG appropriation that was programmed for a total of \$68M in FY 2005. To utilize our current legacy database systems to provide this data, we would have required a “snapshot” at the beginning of FY 2007 which identified the total funded requisitions for the upcoming fiscal year. As an example, we have a current snapshot of remaining FY 2008 requisitions, indicating 10,104 items are currently funded for FY 2008. A cursory review of the status of these requisitions at the end of FY 2008 will provide us this data for next year’s National Guard and Reserve Equipment Report (NGRER).

As of January 2008, the ANG has a total of 39,201 items requisitioned, but not yet received. While this information shows “point-in-time” data, it is representative of the total items required to become fully equipped. However, it is imperative to note that, even upon receipt of the resources to fund these items, with the 18–24 month lag time, additional unfunded requisitions will be generated to either replenish existing stock or procure new stock based upon changed requirements.



## **Appendix C Points of Contact**

### **DEPARTMENT OF DEFENSE**

**Office of the Assistant Secretary of Defense for Reserve Affairs  
ATTN: OASD/RA (M&F)  
1500 Defense Pentagon, Room 2E217  
Washington, DC 20301-1500**

Ms. Patricia J. Walker  
Deputy Assistant Secretary of Defense for Reserve Affairs  
(Materiel & Facilities)  
(703) 695-1677

COL Stuart Taylor  
OASD/RA (M&F)  
Deputy Director, Equipment Resources and Evaluation  
(703) 695-1677  
Stuart.G.Taylor@osd.mil

### **UNITED STATES ARMY**

**Office of the Assistant Secretary of the Army for Manpower and Reserve Affairs  
ATTN: SAMR-FMMR  
111 Army Pentagon, Room 2E485  
Washington, DC 20301-0500**

LTC Hank Amato (ASA/M&RA)  
(703) 693-2464  
Hank.Amato@hqda.army.mil

LTC Thomas Garman (HQDA DCS G-4)  
(703) 614-0796  
Tony.Garman@us.army.mil

MAJ Bill Canaley (ARNG)  
(703) 607-5668  
William.Canaley@us.army.mil

LTC Ron Dix (Army Reserve)  
(703) 601-3466  
Ronnie.Dix@us.army.mil

## **UNITED STATES MARINE CORPS**

**Headquarters, United States Marine Corps  
Office of Marine Forces Reserve  
FOB 2, Navy Annex, Room 1233  
Washington, DC 20380-1775**

Maj Marcus Woollard  
(703) 692-6922  
Marcus.Woollard@usmc.mil

## **UNITED STATES NAVY**

**Headquarters, United States Navy  
Office: Chief of Naval Operations  
ATTN: CNO-N9598E  
2000 Navy Pentagon  
Washington, DC 20350-2000**

CDR Todd Anderson (OCNR)  
(703) 614-1613  
Todd.M.Anderson@navy.mil

## **UNITED STATES AIR FORCE**

**Headquarters, United States Air Force  
ATTN: SAF/MRR (Reserve Affairs)  
1030 Air Force Pentagon, Room 5D742  
Washington, DC 20330-1030**

Col Steven Kett (SAF/MRR)  
(703) 697-6431  
Steven.Kett @pentagon.af.mil

Maj John Clark (NGB/A5)  
(301) 836-8506  
John.Clark@ngb.ang.af.mil

Lt Col Michael Geysler (AF/REXO)  
(703) 695-5046  
Michael.Geysler@pentagon.af.mil

**UNITED STATES COAST GUARD**

**Commandant  
United States Coast Guard  
ATTN: Director Reserve & Training  
Office CG-1311  
1900 Half Street, S.W.  
Washington, DC 20593-0001**

LTJG Yanira Tirado  
(202) 475-5450  
Yanira.Tirado@uscg.mil



## **Appendix D**

### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
AAO	Approved Acquisition Objective
AAO	Army Acquisition Objective
AATC	Air National Guard/Air Force Reserve Test Center
ABCS	Army Battle Command System
AC	Active Component
ACC	Air Combat Command
ACP	Army Campaign Plan
ADS	Airlift Defensive Systems
AEF	Aerospace Expeditionary Force
AERC	Army Equipment and Re-use Conference
AESA	Active Electronically Scanned Array
AETC	Air Education and Training Command
AF	Air Force
AFB	Air Force Base
AFR	Air Force Reserve
AFRC	Air Force Reserve Command
AFRL	Air Force Research Laboratory
AFS	Air Force Station
AFSOC	Air Force Special Operations Command
AFSPC	Air Force Space Command
AFTADS	Advanced Field Artillery Tactical Data System
AGM	Air-to-ground Missile
AIM	Air-to-air Missile
AMC	Air Mobility Command
AMCM	Airborne Mine Countermeasures
AMDWS	Air and Missile Defense Workstation
AME	Alternate Mission Equipment
AMI	Avionics Midlife Improvement
AMP	Avionics Modernization Program
AMSA	Area Maintenance Support Activities
ANG	Air National Guard
ANGB	Air National Guard Base
AOC	Air and Space Operations Center
AOR	Area of Responsibility
APC	Armored Personnel Carrier
APN	Aircraft Procurement Navy
APS	Army Pre-positioned Stock
APU	Auxiliary Power Unit
AR	United States Army Reserve
ARB	Air Reserve Base
ARC	Air Reserve Component
ARFMES	Army Reserve Fleet Management and Equipping Strategy
ARFORGEN	Army Force Generation
ARH	Armed Reconnaissance Helicopter
ARNG	Army National Guard
ARPL	Army Resourcing Priorities List
ARTS	Army Reserve Training Strategy
ASAS	All Source Analysis System
ASD	Area Search Detachment

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### Acronym Glossary

<b>Acronym</b>	<b>Nomenclature</b>
ASIP	Advance System Improvement Program
ASOC	Air Support Operations Center
ASV	Armored Security Vehicle
AT3	Advanced Tactical Targeting Technology
ATLAS	All-terrain Lifter Army System
ATLASS I	Asset Tracking, Logistics, and Supply System
ATM	Air Traffic Management
ATP	Advanced Targeting Pod
AW	Airlift Wing
BCS3	Battle Command Sustainment Support System
BCS-M	Battle Control System–Mobile
BCT	Brigade Combat Team
BDA	Bomb Damage Assessment
BFA	Battlefield Functional Area
BFV	Bradley Fighting Vehicle
BL	Battle Loss
BLOS	Beyond Line-of-sight
BOIP	Basis of Issue Plan
BOSS	Boom Operator Simulation System
BRAC	Base Realignment and Closure
BU2	Builder Second Class
C2	Command and Control
C2ISR	Command and Control, and Intelligence, Surveillance, and Reconnaissance
C4I	Command, Control, Communications, Computers, and Intelligence
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CA	Civil Affairs
CACS	Command and Control Squadron
CAF	Combat Air Force
CAISI	Combat-service-support Automated Information System Interface
CAMEL	Unit Water Pod System
CARA	Combined Altitude Radar Altimeter
CAS	Close Air Support
CBBF	Contour Box Beam Fitting
CBMU	Construction Battalion Maintenance Unit
CBRN	Chemical, Biological, Radiological, and Nuclear
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-yield Explosive
CCIP	Common Configuration Improvement Program
CCMRF	CBRNE Consequence Management Response Force
CENTAF	United States Central Command Air Forces
CENTCOM	United States Central Command
CESE	Civil Engineering Support Equipment
CFCC	Commercial Fire Control Computer
CG	Coast Guard
CGBI	Coast Guard Business Intelligence
CHP	Controlled Humidity Preservation
CHU	Cargo Handling Unit

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<b>Acronym</b>	<b>Nomenclature</b>
CMDS	Countermeasures Dispensing System
CMFDS	Color Multi-function Display System
CMS	Countermeasures Management System
CNGB	Chief of the National Guard Bureau
CNO	Chief of Naval Operations
CNS	Communication, Navigation, and Surveillance
COMSEC	Communications Security
CONUS	Continental United States
COP	Common Operating Picture
CR-I	Crisis Response-Immediate
CROP	Container Roll-in Roll-out Platform
CS	Combat Support
CS	Crown Skin
CSAR	Combat Search and Rescue
CSS	Combat Service Support
CSS	Cryptologic Support Site
CSSD	Combat Service Support Detachment
CTRC	Cold Regions Test Center
CWB	Center Wing Box
DA	Department of the Army
DAGR	Defense Advanced Global Positioning System Receiver
DARPL	Department of the Army Resourcing Priorities List
DCGS	Distributed Common Ground System
DGS	Distributed Ground Station
DHS	Department of Homeland Security
DISA	Defense Information Systems Agency
DLI	Data Link Integration
DMO	Distributed Mission Operations
DMT	Distributed Mission Training
DoD	Department of Defense
DoDD	Department of Defense Directive
DOG	Deployment Operations Group
DoN	Department of the Navy
DOTMLPF	Doctrine, Organizations, Training, Materiel, Leadership and Education, Personnel, and Facilities
DPAS	Defense Priorities and Allocations System
DRRS	Defense Readiness Reporting System
DSCA	Defense Support to Civil Authorities
DTOC	Distributed Training Operations Center
DTSS	Digital Topographic Support System
DV	Distinguished Visitor
DVR	Digital Video Recorder
DVTE	Deployable Virtual Training Environment
EA	Electronic Attack
ECS	Equipment Concentration Site
EFDS	Expeditionary Force Development System
EGI	Embedded Global Positioning System/Internal Navigation System

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<b>Acronym</b>	<b>Nomenclature</b>
EMOC	Electronic Maintenance Operations Center
EOD	Explosive Ordnance Disposal
EODOSU	Explosive Ordnance Disposal Operational Support Unit
EOH	Equipment On-hand
EP	Electronic Protection
EPA	Environmental Protection Agency
EPCS	Electronic Propeller Control System
EPLRS	Enhanced Position Location Reporting System
EPP	Extended Planning Period
ER	Equipment Readiness
ER	Extended Range
ETIMS	Enhanced Technical Information Management System
EUCOM	European Command
EW	Electronic Warfare
FAA	Federal Aviation Administration
FAC-A	Forward Air Controller-Airborne
FBCB2	Force XXXI Battle Command, Brigade and Below
FCMT	Full Combat Mission Trainer
FCS	Future Combat System
FFG	Guided Missile Frigate
FLIPL	Financial Liability Investigation of Property Loss
FLIR	Forward Looking Infrared
FMT	Full Mission Trainer
FMTV	Family of Medium Tactical Vehicles
FOC	Full Operational Capability
FORSCOM	Forces Command
FRP	Fleet Response Plan
FS3	Fire Support Sensor System
FT	Fort
FTD	Flight Training Device
FTU	Formal Training Unit
FY	Fiscal Year
FYDP	Future Years Defense Plan
GA	Guardian Angel
GATM	Global Air Traffic Management
GAWS	Guardian Angel Weapons System
GCAS	Ground Collision Avoidance System
GCCS-A	Global Command and Control System-Army
GCS	Ground Control Station
GCSS	Global Combat Support System
GPH	Gallons of Water Per Hour
GPS	Global Positioning System
GWOT	Global War on Terrorism
HD	High Definition
HEMTT	Heavy Expanded Mobility Tactical Truck
HET	Heavy Equipment Transport
HF	High Frequency

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### Acronym Glossary

<b>Acronym</b>	<b>Nomenclature</b>
HIMARS	High Mobility Artillery Rocket System
HIPPO	Water Tank
HLD	Homeland Defense
HLS	Homeland Security
HM	Navy Helicopter Squadron
HMCS	Helmet Mounted Cueing System
HMH	Maine Heavy Helicopter Squadron
HMLA	Marine Light Attack Helicopter Squadron
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HQ	Headquarters
HQDA	Headquarters, Department of the Army
HS	Helicopter Submarine
HSC	Helicopter Sea Combat
HTS	High-speed Antiradiation Missile (HARM) Targeting System
HTV	Heavy Tactical Vehicles
HUMINT	Human Intelligence
IAMS	Inertially Aided Munitions
IAP	International Airport
IAW	In Accordance With
IBR	Intelligence Broadcast Receiver
ICAM	Improved Chemical Agent Monitor
ICAO	International Civil Aviation Organization
IED	Improvised Explosive Device
I-FACT	Indirect Fire—Forward Air Control Trainers
IFF	Identification, Friend or Foe
IISR	Integrated Intra Squad Radio
ILO	In-lieu-of
IMA	Individual Mobilization Augmentee
IMETS	Integrated Meteorological System
INMARSAT	International Maritime Satellite
INS	Inertial Navigation System
IO	Information Operations
IP	Internet Protocol
IR	Infrared
IRCM	Infrared Countermeasures
IRR	Individual Ready Reserve
ISISCIS	Interim SATCOM Incident Site Communications Set
ISO	International Standardization Organization
ISR	Intelligence, Surveillance, and Reconnaissance
J/CFACC	Joint/Combined Force Air Component Commander
JASSM	Joint Air-to-surface Stand-off Missile
JATO	Jet Assisted Takeoff
JCA	Joint Cargo Aircraft
JCALs	Joint Computer-aided Acquisition and Logistic Support
JDAM	Joint Direct Attack Munitions
JFMCC	Joint Force Maritime Component Commander
JHMCS	Joint Helmet-mounted Cueing System

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### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
JNN	Joint Network Node
JRB	Joint Reserve Base
JSpOC	Joint Space Operations Center
JSTARS	Joint Surveillance Target Attack Radar System
JSTDS	Joint Services Transportable Decontamination System
JSTD-SS	Joint Services Transportable Decontamination System–Small Scale
kW	Kilowatt
LAIRCM	Large Aircraft Infrared Countermeasures
LAN	Local Area Network
LARS	Lightweight Airborne Recovery System
lb	Pound
LCOP	Logistics Common Operating Picture
LDS	Lightweight Decontamination System
LHS	Load Handling System
LIN	Line Item Number
LIW	Logistics Information Warehouse
LLDR	Lightweight Laser Designator Rangefinder
LMTV	Light Medium Tactical Vehicle
LOG	Logistics
LOS	Line of Sight
LPCR	Low Power, Color Radar
LRE	Launch and Recovery Element
LSS	Laser Spot Search
LST	Laser Spot Track
LSWAN	Logistics Secure Wide Area Network
LUH	Light Utility Helicopter
MACS	Marine Air Control Squadron
MAF	Mobility Air Forces
MAFFS	Modular Airborne Firefighting System
MAG	Marine Aircraft Group
MAGTF	Marine Air-Ground Task Force
MAJCOM	Major Command
MALS	Marine Aviation Logistics Squadron
MANPAD	Man Portable Air Defense
MAW	Marine Aircraft Wing
MAWRS	Mobile Aircrew Web Restraining System
MC	Marine Corps
MC3	Mass Communications Third Class
MCAG	Maritime Civil Affairs Group
MCAS	Marine Corps Air Station
MCAS	Maritime Civil Affairs Squadron
MCAT	Reserve Maritime Civil Affairs Team
MCD	Mobile Communications Detachment
MCI	Major Component Item
MCM	Mine Countermeasures
MCO	Marine Corps Order

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### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
MCS	Maneuver Control System
MCS	Modular Control System
MDS	Mission Design Series
MEDEVAC	Medical Evacuation
MESF	Maritime Expeditionary Security Force
MFR	Marine Forces Reserve
MHC	Mine Hunter Coastal
MHE	Material Handling Equipment
MIE	Major Items of Equipment
MILSTAR	Military Strategic and Tactical Relay
MIMMS	Marine Corps Integrated Maintenance Management System
MMCT	Multi-mission Crew Trainer
MMS	Marine Mammal Support
MOA	Memorandum of Agreement
MPRA	Maritime Patrol Reconnaissance Aviation
MRD	Manpower Requirements Determination
MSU	Mobile Support Unit
MTBM	Mean Time Between Maintenance
MTEC	Mission Training Engineering Center
MTOE	Modified Table of Organization and Equipment
MTS	Movement Tracking System
MTT	Multi-task Trainer
MTV	Medium Tactical Vehicle
MTVR-ODS	MTV Replacement-Operator Driving Simulator
MWS	Missile Warning System
MYP	Multi-year Procurement
NAS	Naval Air Station
NASA	National Aeronautics and Space Administration
NAVELSG	Naval Expeditionary Logistics Support Group
NBC	Nuclear, Biological, and Chemical
NCC	Navy Component Commander
NCD	Naval Construction Division
NCF	Naval Construction Force
NCFSU	Naval Construction Force Support Unit
NCR	Naval Construction Regiment
NCW	Naval Coastal Warfare
NDAA	National Defense Authorization Act
NECC	Navy Expeditionary Combat Command
NG	National Guard
NGB	National Guard Bureau
NGREA	National Guard and Reserve Equipment Appropriation
NGRER	National Guard and Reserve Equipment Report
NHC	National Hurricane Center
NIPR	Non-secure Internet Protocol Router
NMCB	Naval Mobile Construction Battalion
NMS	National Military Strategy
NORTHCOM	United States Northern Command
NRFI	Not Ready For Issue

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### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
NRO	National Reconnaissance Office
NSC	National Security Cutter
NTISR	Nontraditional Intelligence, Surveillance, and Reconnaissance
NVANG	Nevada Air National Guard
NVD	Night Vision Device
NVG	Night Vision Goggles
NVIS	Night Vision Imaging System
NW	Network Warfare
OCD	Ordnance Clearance Detachment
OCONUS	Outside the Continental United States
OEF	Operation Enduring Freedom
OPF	Operational Flight Program
OH	On-hand
OIF	Operation Iraqi Freedom
ONE	Operation Noble Eagle
ONS	Operational Needs Statement
OPLAN	Operation Plan
OPLANS	Operation Plans
OPNAV	Chief of Naval Operations
OPTEMPO	Operating Tempo
ORD	Operational Requirement Document
OSA	Operational Support Airlift
OSD	Office of the Secretary of Defense
OSU	Operational Support Unit
PACOM	Pacific Command
PBUSE	Property Book Unit Supply Enhanced
PC	Personal Computer
PE	Precision Engagement
PIDS	Pylon Integrated Dispensing System
PLS	Palletized Load System
POC	Predator Operation Center
POL	Petroleum, Oil, and Lubricants
POM	Program Objective Memorandum
PPE	Personal Protective Equipment
PPS	Propulsion Pod System
PPSL	Predator Primary Satellite Link
PRESBUD	President's Budget
PSU	Port Security Unit
PW	Pratt & Whitney
QDR	Quadrennial Defense Review
RAMMP	Reliability and Maintainability Maturation Program
RC	Reserve Component
RDT&E	Research, Development, Test, and Evaluation
REF	Rapid Equipping Force
RERP	Reliability Enhancement and Re-engining Program

## **Appendix D**

### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
RF	Radio Frequency
RFI	Rapid Fielding Initiative
ROC	Reaper Operation Center
ROS	Reports of Survey
ROVER	Remote Observation Video Enhanced Receiver
ROWPU	Reverse Osmosis Water Purification Unit
RQW	Rescue Wing
RSTA	Reconnaissance, Surveillance, and Target Acquisition
RTC	Reserve Training Center
RTIC	Real Time Information in the Cockpit
RWR	Radar Warning Receiver
SAAS-MOD	Standard Army Ammunition System–Modernized
SADL	Situation Awareness Data Link
SAFIRE	Surface-to-air Fire
SAM	Surface-to-air Missile
SAMS-E	Standard Army Maintenance System–Enhanced
SARSS	Standard Army Retail Supply System
SASSY	Supported Activities Supply System
SATCOM	Satellite Communications
SAW	Squad Automatic Weapon
SBE	Stay Behind Equipment
SCU	Software Core Upgrade
SDB	Small Diameter Bomb
SELRES	Selected Reserve
SERE	Survival, Evasion, Resistance, and Escape
SFMR	Step Frequency Microwave Radiometer
SGEWG	Strategic Ground Equipment Working Group
SINCGARS	Single-channel Ground and Airborne Radio System
SIPR	Secure Internet Protocol Router
SKE	Station Keeping Equipment
SLOS	Secure Line-of-sight
SMFCD	Smart Multi-function Color Display
SOCOM	Special Operations Command
SOUTHCOM	Southern Command
SOW	Special Operations Wing
SPP	State Partnership for Peace
SRC	Standard Requirement Code
SS	Senior Scout
SSTRO	Security, Stabilization and Reconstruction Operations
STAMIS	Standard Army Information System
STAR	Structural Augmentation Roadmap
STE	Strategic Transformation Effort
SUAS	Small Unmanned Aircraft Systems
SV	Scathe View
SWAN	Secure Wide Area Network
SWS	Space Warning Squadron
T/A	Training Allowance

## **Appendix D**

### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
T/O&E	Table of Organization and Equipment
TACC	Tactical Air Command and Control
TACP	Tactical Air Control Party
TAIS	Tactical Airspace Integration System
TARS	Theater Air Reconnaissance System
TAS	Tool Accountability System
TASS	The Army School System
TAWS	Terrain Awareness and Warning System
TC-AIMS	Transportation Coordinators Automated Information Management System
TCAS	Traffic Alert and Collision Avoidance System
TDA	Table of Distribution and Allowances
TOA	Table of Allowance
TOCS	Tactical Operation Combat System
TOE	Table of Organization and Equipment
TPE	Theater Provided Equipment
TPSB	Transportable Port Security Boat
TQG	Tactical Quiet Generator
TRP	Training Readiness Platform
TS	Training Systems
TSC	Theater Security Cooperation
TSW	Tactical Support Wing
TTC	TASS Training Center
TTP	Tactics, Techniques, and Procedures
TWPS	Tactical Water Purification System
TWS	Thermal Weapon Sight
TWS	Thermal Weapon Sight
TWV	Tactical Wheeled Vehicle
UARRSI	Universal Aerial Refueling Receptacle Slipway
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
UHF	Ultra-high Frequency
ULLS-AE	Unit Level Logistics System–Aviation Enhanced
ULT	Unit Level Trainer
USAF	United States Air Force
USAR	United States Army Reserve
USCG	United States Coast Guard
USCGR	United States Coast Guard Reserve
USFF	United States Fleet Forces Command
USMC	United States Marine Corps
USMCR	United States Marine Corps Reserve
USS	United States Ship
VAQ	Navy Tactical Electronics Warfare Squadron
VAW	Navy Carrier Airborne Early Warning Squadron
VBSS	Visit, Board, Search, and Seizure
VCC+	Very High Speed Integrated Circuitry Central Computer
VCCS	Virtual Combat Convoy System
VCCT-M	Virtual Combat Convoy Trainer-Marine

## **Appendix D**

### **Acronym Glossary**

<b>Acronym</b>	<b>Nomenclature</b>
VDL	Video Data Link or down link
VHF	Very High Frequency
VHSIC CC	Very High Speed Integrated Circuitry Central Computer
VIP	Very Important Person
VMFA	Marine Fighter/Attack Squadron
VMU	Marine Unmanned Aerial Vehicle Squadron
VP	Navy Patrol Squadron
VSAT	Very Small Aperture Satellite Terminal
WCMD	Wind Corrected Munitions Dispenser
WEPTAC	Weapons and Tactics Conference
WRMS	War Reserve Materiel Stock
WS	Weapon System
WSEP	Weapon System Evaluation Program
WST	Weapon Systems Trainer

