DEPARTMENT OF DEFENSE

NATIONAL GUARD AND RESERVE
EQUIPMENT REPORT FOR
FISCAL YEAR 2012

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NATIONAL GUARD AND RESERVE EQUIPMENT REPORT FOR FISCAL YEAR 2012

(NGRER FY 2012)

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

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FOREWORD

Our ultimate goal is for the Reserve Components (RCs) to be a ready force, equipped and supported with facilities, ranges, and simulators to succeed in fulfilling their domestic and overseas missions. We are striving to ensure the RCs have the right equipment, available in the right quantities, at the right time, and at the right place. These forces must be consistently and predictably equipped to support the "Train-Mobilize-Deploy" model for the Total Force managing the reserve as an operational force. Our efforts include the development of strategies and processes to ensure RC equipment readiness levels are not adversely affected by losses from "stay-behind" equipment, cross-leveling, and reset policies. We need to do all this at the right value to the taxpayer.

To accomplish this goal in a resource-constrained environment, we need to develop a new way of thinking about equipment and equipment readiness. The days of planning for every unit having every piece of equipment authorized, all the time, is unsustainable, fiscally irresponsible, and obsolete.

Components and units should expect to have access to enough modern equipment to train at home station, deploy for contingency or crisis response, and react to domestic consequence management events. Equipment to meet training requirements does not always need to be assigned to the unit using it for training purposes, but it does need to be the same equipment that will be used during execution of their mission. A much more efficient and effective way to manage equipment is to create and utilize equipment pools and training sets, including robust local and regional simulation capabilities, and locate them regionally on a network of regional training bases.

The Office of the Assistant Secretary of Defense for Reserve Affairs is about to publish a Regional Integrated Training Environment concept. This concept is a joint training strategy to optimize available resources through the establishment of joint regional integrated training facilities, the use of shared equipment pools supplemented by locally-based simulation, and training strategies designed to produce and sustain a pre-trained Total Reserve.

As we reinforce policies, implement strategies, and continue to call upon our RC, we must remember that judicious use is still the watchword. The RC continues to be a mission-ready, critical element of our National Security Strategy. Because the RC will continue in its role as an operational force, we must ensure a Total Force policy exists that supports employment of the RC in both an operational and strategic role. We can ensure that the RC are trained, ready, and continue to perform to the level of excellence that they have repeatedly demonstrated.

Sincerely,

Dennis M. McCarthy

Table of Contents

Chapter 1 Overview

Chapter 2 United States Army Reserve Components

Chapter 3 United States Marine Corps Reserve

Chapter 4 United States Navy Reserve

Chapter 5 United States Air Reserve Components

Chapter 6 United States Coast Guard Reserve

Chapter 1 Overview

I. Strategic Context

The Department is transforming the Guard and Reserve from a purely strategic force to a sustainable Reserve force with both operational and strategic roles captured in DoD Directive (DoDD) 1200.17, *Managing the Reserve Components as an Operational Force*. Effective management of the Guard and Reserve as an operational force required changes in numerous policies, including: mobilization, force structure rebalancing, personnel management, training, readiness, equipping, and family and employer support. These changes have been critical to RC success during what is now the largest mobilization of the Guard and Reserve since the Korean War, in a war that has lasted longer than World War II. It is important to note that in addition to these expanded operational capabilities, the RC still provided strategic depth to meet U. S. defense requirements across the full spectrum of conflict.

The Quadrennial Defense Review (QDR) and the Commission on the National Guard and Reserves (CNGR) have helped establish the foundation for developing the RC future. The 2010 QDR calls for a comprehensive review of the future role of the RC, including an examination of the balance between Active and Reserve forces. Effective use of the RC will act as a force multiplier, increasing the capacity and expanding the range of available capabilities and thus enhancing and preserving the All-Volunteer Force. Force multiplication is generated through lower overall personnel and operating costs, a right mix and availability of equipment, a more efficient and effective use of defense assets, and an increased sustainability of both the Active Component (AC) and RC. Achieving the defense strategy articulated in the QDR requires a prepared and vibrant National Guard and Reserve, seamlessly integrated within the Total Force. If the RC are utilized in a deliberately planned way, and are seamlessly integrated as members of a true Total Force, the nation will reap the benefits deserved.

The Department continues to work the 53 CNGR recommendations the Secretary of Defense (SecDef) approved in his November 2008 memorandum. The CNGR recommendations that the SecDef approved will continue to be a high priority for the RC until they are fully implemented. The implementation of those recommendations will enable the proper utilization of the National Guard and Reserve, reducing the burden on all forces, which is a Presidential priority. Effective utilization of the Guard and Reserve increases the strategic capacity of the Total Force. The CNGR had specific recommendations to address this challenge. The Deputy Secretary of Defense directed and agreed to an implementation plan that we have been executing since August 2009. The RC of each Military Department must be properly equipped not just to deploy, but to also sustain itself as a trained and ready force. The design of the RC equipping strategy is envisioned to procure and distribute required equipment and 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. This strategy takes into account the Department's support to each state's homeland defense (HD) mission, while maximizing equipment availability throughout the force.

We have authored mobilization policies that institutionalized "judicious use" as the core principle of RC participation, and are the foundation of predictability (one-year mobilization and 1:5 utilization goals) for an operationalized Reserve force. This principle is widely supported by

military members, families, and employers alike. Of note is that the budget supports preparation of 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, potentially increasing the Department's overall capacity while reducing costs.

As the Services perfect their rotational readiness models, it will be increasingly common to notify units of upcoming missions up to two years in advance. We have streamlined the mobilization and pre-deployment training processes, and these and other changes are sustaining the RC during this extensive mobilization period. In addition, they are implementing a "train-mobilize-deploy" construct, as opposed to the old Cold War model of "mobilize-train-deploy." This means that RC units must be ready, manned, trained, medically prepared, and equipped when their scheduled availability comes up, and they must be funded accordingly. They need a roadmap to list the waypoints, foster dialog, and change some widely held traditional beliefs. Extracting full value from the RC will require a fundamental shift in the way many in DoD currently envision these forces. During the Cold War, military planning generally viewed the Guard and Reserve as essentially a "force of last resort," to be used after all possible AC solutions had been attempted. The Services should not hesitate to use RC formations as the "force of first choice" for requirements for which they are well suited.

Predictability is perhaps one of the most important keys to tapping into the reservoir of Guard and Reserve capabilities. The process by which roles and missions are assigned to the Reserve and Guard should be characterized by a belief that these forces can, and, frequently should, be the first choice for recurring or predictable missions within their capabilities, because they are and have been fully accessible. In this context, predictability encourages anticipatory planning—thinking ahead, not just in terms of the type of mission, but the timing and duration of the mission as well. Predictable missions create lead time for proper planning and training. That kind of anticipatory thinking can't be done when the RC is used as the "last option." The other important parts of this "best advantage" equation are the assignment of challenging and relevant missions to the National Guard and Reserves, and ensuring that resources are available in order to set the conditions for their success.

Using the RC on a rotational basis, especially where the cycle can be pointed toward a predictable mission, maintains their readiness and expands their availability and capability. The rotational readiness models in use today—the Army Force Generation (ARFORGEN), the Air and Space Expeditionary Force (AEF), etc.—are essential to ensuring that the Guard and Reserve are trained and ready when needed. We must also ensure that the visibility, transparency, and accountability of RC equipment, from planning, programming, and budgeting, through acquisition and fielding, occur at all levels. In addition, resetting the force is absolutely essential because it integrates the transformation, reconstitution, rebalancing, modernization, and recapitalization into a common action with a focus on the contribution to the Services' roles and missions. Our ultimate goal is for the RC to be a ready force, equipped and supported with facilities, ranges, and simulators to succeed in fulfilling their domestic and overseas missions. Our efforts include the development of strategies and processes to ensure RC equipment readiness levels are not adversely affected by losses from "stay-behind" equipment, cross-leveling, and reset policies. We are striving to ensure the RCs have the right equipment, available in the right quantities, at the right time, and at the right place to support the "Train-Mobilize-

Deploy" model for a Reserve as part of the operational forces. We are expanding the use of simulators that increase proficiency while, at the same time, reducing equipment costs and range utilization. An effective "Train-Mobilize-Deploy" force must not encounter modern equipment for the first time after mobilization or after arriving in theater. We also support the RC in their HD and civil support roles. This is a Total Force responsibility, and one in which we are making considerable progress. Identifying and procuring critical dual use equipment (equipment that is used in both domestic and war fighting missions) is another effort that has realized tremendous dividends. As the Department embarks on a new RC equipment strategy, we are working hand-in-hand with the Services to improve the transparency of equipment from the appropriation of funding to the delivery of that equipment.

HD and defense support of civil authorities (DSCA) are Total Force responsibilities. The RC, particularly the National Guard, are the center of gravity for DoD HD and DSCA response operations. RC roles continue to evolve in this complex environment, but one thing is certain— the community basis of the Guard and Reserve have them already "forward deployed" in this critical area of responsibility. They have the local knowledge necessary to succeed in times of greatest stress on local people and institutions.

The RC have the capability and capacity to continue, if properly funded and equipped. As we reinforce policies, implement strategies, and continue to call upon our RC, we must remember that judicious use is still the watchword. The RC continue to be a mission-ready, critical element of our National Security Strategy. Because our RC will be asked to continue in its role as an operational force, we must ensure a Total Force policy exists that supports employment of the RC in both an operational and strategic role. We can ensure that the RC are trained, ready, and continue to perform to the level of excellence that they have repeatedly demonstrated.

II. Scope of the Report

The National Guard and Reserve Equipment Report (NGRER), mandated in Section 10541, Title 10, United States Code, is a statutory requirement that reflects 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. Data on equipment included in the report consist of high-value, mission-essential equipment requirements, critical equipment shortages, Service procurements, 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 the RC. 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. Detail on potential costs such as modernization of existing systems is contained, where appropriate, in the chapters on the respective individual RC.

RC inventories include thousands of different types of equipment. The FY 2012 NGRER highlights 927 major equipment types whose total dollar value comprises approximately

85 percent of the value of all RC equipment. Results of analyses of RC inventories are based primarily on the dollar value of the equipment because that allows for 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 costs adjusted for inflation or the current replacement costs. The FY 2008 National Defense Authorization Act (NDAA) directed new equipment reporting requirements for the National Guard. This guidance is highlighted in its entirety in Appendix A. The National Guard Bureau responds to the requirements in Appendix B.

The Army and Air Force do not currently have the ability to provide the procurement transparency required to complete the report but have been working with the Department to develop a process to more accurately answer these directives.

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.

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

Reserve Component	FY 2007 NGRER	FY 2008 NGRER	FY 2009 NGRER	FY 2010 NGRER	FY 2011 NGRER	FY 2012 NGRER
ARNG	129	231	421	411	404	396
AR	249	233	222	220	212	208
USMCR	157	161	200	101	195	213
USNR	36	33	33	35	36	44
ANG	33	31	33	31	31	31
AFR	19	16	17	17	17	16
USCGR	15	15	15	19	19	19
Total	**638**	**720**	**941**	**834**	**914**	**927**

III. Equipment Shortages

The aggregate equipment shortage for all the RCs is approximately $54.2B. 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 (ANG) reflects a 2.9 percent shortage of its major items as of the end of FY 2010. However, the ANG has documented a $7B shortfall for modernization of its aircraft fleet in the *ANG 2012 Weapons Systems Modernization Requirements* book.

The Army National Guard (ARNG) and Army Reserve (AR) shortage costs depicted in Chart 1-2 show the cost based on the modified table of organization (MTOE) and table of distribution and allowances (TDA) requirements and the inventory without recognition of authorized substitutes (per Army Supply Bulletin 700-20) and modernized replacements (per pending or approved

Basis of Issue Plans). Chart 1-2 indicates a $40.7B total shortage cost for the ARNG and $9.5B for the AR. When authorized substitutes and modernized replacements are included, the ARNG shortage reduces to $25.2B and the AR shortage reduces to $5.5B. The Army expects overall unit shortages to be reduced, as assets from Operation New Dawn are reset and re-distributed. To mitigate shortages, the Army has instituted an equipping strategy that distributes assets based on ARFORGEN.

The Marine Corps Reserve (USMCR) reflects a 14.8 percent shortage of its major items; however, the USMCR is equipped to a home station training allowance only. The value of the delta between the USMCR on-hand equipment and its training allowance is $345M or 6.2 percent. The majority of this delta along with the delta between the training allowance and the wartime requirement are not due to lack of procurement funding, but rather are a result of post-procurement equipment distribution to sustain current operations. More information on the Marine Corps equipping strategy and the USMCR's use of a training allowance can be found in the Service's chapter.

These conditions are explained in more detail in each Service's respective chapter.

Chart 1-2. Beginning FY 2011 Reserve Component Equipment Shortages

Reserve Component	Requirements ($)	On-hand ($)	Shortage ($)	Shortage (% of Reqd $s)
ARNG	$107,022,260,411	$66,277,389,846	$40,744,870,565	38.1%
AR	25,584,325,312	16,040,527,876	9,543,797,436	37.3%
USMCR	5,528,229,631	4,707,362,484	820,867,147	14.8%
USNR	10,297,002,798	9,461,719,369	835,283,429	8.1%
ANG	44,600,000,000	43,300,000,000	1,300,000,000	2.9%
AFR	23,387,360,423	22,427,591,645	959,768,778	4.1%
USCGR	34,940,000	30,352,000	4,588,000	13.1%
Total	**$216,454,118,575**	**$162,244,943,220**	**$54,209,175,355**	**25.0%**

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

As the RC missions continue to grow, the need to understand the RC capability to resource those missions and with what essential assets has become more complex. The Defense Readiness Reporting System (DRRS), directed by the DoD Directive 7730.65, is an operational tool that enables the Reserve chain of command to share the necessary readiness information so it may respond to existing and emerging requirements. This information expands upon traditional readiness reporting by incorporating detailed resource data from various Service and joint authoritative data sources. DRRS also provides an objective resource status to the commander that supports the mission-essential task list (METL), with their associated conditions and standards. These METL, and their assessments, provide the Department a capabilities-based view of operational readiness that supports the National Military Strategy. Moreover, the detailed resource data is included with traditional readiness resource schema to provide a more comprehensive overview for mission assessments, both for warfighting and domestic responses.

As the RC continue to expand their role as an operational force, sharing this equipment data is increasingly more important. Consequently, to support the data requirements as identified by the global force management, DRRS has been developed to capture both wartime missions and domestic response capabilities, providing capability assessments that show the National Guard's readiness to accomplish both its Title 10 requirements and its preparedness to support civilian authorities in their Title 32 capacity. Currently, the Civil Support Task List, a collaborative effort between military and civilian response agencies, is under development and will aide in assessing the National Guard's ability to respond to domestic incidents, whether manmade or natural and will help answer the ultimate question "Ready for What". Overall, DRRS allows for accurate status information to be readily available at the state and national level, helping to both appropriately manage expectations and provide for effective and relevant support.

IV. Equipment Procurement

The Service plans for new equipment procurement, both AC and RC, are provided in their respective Future Years Defense Program (FYDP). Each year, the President's Budget submission provides the RC equipment procurement details in the P-1R budget exhibits. *Table 3*, which appears after each RC narrative section in this report, depicts the requested RC equipment procurements for FY 2012 through FY 2014. Chart 1-3 shows funding levels from three RC procurement sources for FY 2006 through FY 2012. (Note: the FY 2012 P-1R was not available in time for publication in this year's NGRER, and will be updated in next year's NGRER.) The FY 2012 funding does not include any NGREA or Congressional additions, since those funding amounts are not established until after the publication of the FY 2012 NGRER.

Chart 1-3. Reserve Component Procurement Funding

FY	Procurement Funding Source	RC Procurement Funding ($ in Millions)							
		ARNG	AR	USMCR	USNR	ANG	AFR	Total	Grand Total
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	1,403.0	520.0	67.0	0.0	10.0	0.0	2,000.0	
	NGREA	769.9	129.6	29.6	29.6	229.6	29.6	1,217.9	
	Total	**3,376.8**	**784.8**	**348.6**	**132.6**	**925.0**	**220.2**		**$5,788.0**
2007	President's Budget P-1R Submit	2,115.6	391.8	120.4	60.0	628.8	234.1	3,550.8	
	Congressional Adds to AC Accts for RC	17.8	32.2	0.0	6.8	228.6	2.0	287.4	
	Supplemental	1,152.0	507.0	0.0	0.0	361.0	166.0	2,186.0	
	NGREA	1,074.7	89.9	34.9	34.9	74.7	34.9	1,343.8	
	Total	**4,360.1**	**1,020.9**	**155.3**	**101.7**	**1,293.1**	**437.0**		**$7,368.0**
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	7.8	17.9	0.0	70.9	
	Supplemental	1,294.0	590.0	0.0	0.0	25.0	10.0	1,919.0	
	NGREA	1,267.6	182.9	44.7	44.7	149.0	44.7	1,733.6	
	Total	**6,103.1**	**1,463.2**	**144.6**	**104.2**	**825.8**	**371.4**		**$7,278.6**
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	75.1	0.0	0.0	3.2	16.7	0.0	95.0	
	NGREA	778.6	127.3	62.4	62.4	154.4	62.4	1,247.5	
	Total	**6,297.1**	**1,362.6**	**171.9**	**267.5**	**1,385.3**	**507.4**		**$9,991.7**
2010	President's Budget P-1R Submit	3,315.9	1,596.8	40.8	123.5	706.7	215.8	5,999.5	
	Congressional Adds to AC Accts for RC	82.3	0.0	0.0	3.2	123.5	1.2	210.2	
	NGREA	575.0	85.0	45.0	55.0	135.0	55.0	950.0	
	Total	**3,973.2**	**1,681.8**	**85.8**	**181.7**	**965.2**	**272.0**		**$7,159.7**
2011	President's Budget P-1R Submit	3,822.4	1,671.8	24.5	73.8	615.3	95.2	6,303.0	
	Congressional Adds to AC Accts for RC								
	NGREA								
	Total								**$6,303.0**
2012	President's Budget P-1R Submit								
	Congressional Adds to AC Accts for RC								
	NGREA								
	Total								

Note 1: USNR figures include USMCR aircraft procurement funds.
Note 2: The above figures do not include Ammunition procured for the RC.
Note 3: 2006-2009 NGREA include 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: 2011 Congressional Adds and NGREA values will not be available until FY 2011 Appropriations Bill is passed.
Note 7: 2012 P-1R values will not be available until FY 2012 President's Budget request is released.
Note 8: 2012 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; consequently, 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 2011 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 ARNG is transitioning from its role as a strategic reserve to an operational force, as well as continuing to meet its HD/DSCA missions. This makes it critical for the ARNG to continue modernizing. The ARNG continues to focus on better posturing itself towards the Army's ARFORGEN-based Equipping Strategy by increasing its interoperability and modernization of equipment. The Army continues to demonstrate a strong commitment to modernize the ARNG, and as a result, the ARNG has received or is on track to receive its full complement of key systems to include heavy tactical vehicles, small arms, communication systems, field artillery systems, and combat arms systems. However, tactical wheeled vehicles and UH-60 Blackhawk systems still lag behind.

The ARNG's top equipping challenges are:

1. Achieving full component-level transparency for equipment procurement and distribution

The Army has significantly improved and expanded transparency efforts within its equipment procurement and distribution processes. The Army is leveraging a Financial Synchronization and Transparency Integrated Product Team (IPT), a Delivery Certification IPT, and a Transparency General Officer Steering Committee to manage this effort. As of 3rd quarter FY 2010, the Army was collecting transparency data for 85 systems. These systems were selected based on their importance to the ARNG and Army Reserve. While this represents a significant increase from 30 systems that were initially identified in FY 2009, the plan is to collect transparency data on all major procurement systems beginning in FY 2011. The Delivery Certification IPT, successfully traced delivery of over 11,000 pieces of equipment from vendors and depots to individual units. Each piece of equipment was tracked through the distribution process and was also traced to their original funding sources.

Transparency efforts are paying dividends to the ARNG. Utilizing transparency-specific business rules and examining recent equipment deliveries, the Army has identified numerous instances where under-delivery of equipment or diversion of funds during FYs 2009 and 2010 resulted in paybacks to the ARNG. Continued refinement and institutionalization of the processes, business rules, and data systems established by these IPTs will keep transparency of financial and equipment tracking processes on schedule for full implementation by FY 2013. However, the Service components are unable to completely satisfy either of the reporting requirements prescribed in Section 1826 of the FY 2008 NDAA due to a general lack of transparency within portions of the Army equipment procurement and distribution processes.

2. Equipping ARNG units for pre-mobilization training and deployment

The Army instituted a 12 month mobilization policy for the ARNG in FY 2007. Soldiers to be mobilized will conduct pre-mobilization training within their home state on drill weekends and during annual training as part of the "Contiguous Mobilization" concept before their 12 month

orders begin. Under Contiguous Mobilization these Soldiers will start their 12 month orders and move to their mobilization site after finishing the pre-mobilization training. Contiguous Mobilization maximizes pre-deployment training, "boots on the ground" time and strives to limit the number of times a Soldier leaves his/her civilian employer. It is critical that units have the majority of their training equipment 12 months prior to mobilization to conduct this individual and collective training prior to deployment. Pre/post mobilization training resource needs and domestic response equipment needs still exist, but training sets and pooling of equipment strategies are helping to manage this friction.

3. Equipping ARNG units for their Homeland Missions

Current equipping levels reflect decreased readiness due to the reset of units returning from deployments and units transforming under modularity. However, ARNG manages readiness by prioritizing limited resources using the ARFORGEN cycle in support of the National Military Strategy (NMS). To support the NMS, the ARNG must generate relevant and ready forces able to conduct continuous full-spectrum operations to prevail in an era of persistent conflict. To meet these strategic and domestic challenges, the ARNG must fully man, train, and equip units to be operationally ready. The ARNG must organize them to be identical to their AC counterparts to enable seamless integration into the Army force mix; and provide greater predictability of their readiness and availability for deployment.

The Army significantly increased its investment in ARNG equipment, allocating approximately $28B for new procurement and recapitalization between FY 2006 and FY 2009. As a result, the ARNG MTOE equipment on-hand (EOH) posture increased from 69 percent in FY 2006 to 77 percent at the end of FY 2009. ARNG critical dual-use (CDU) EOH, a subset of MTOE requirements, increased from 65 percent to 86 percent during this same period. Over the past year, the ARNG received 96,904 new items of equipment valued at $8.76B. With this new equipment, the MTOE EOH percentage has risen to 77 percent, and the ARNG currently has 86 percent of its CDU EOH.

The ARNG is continuing to posture itself towards the Army's full spectrum ARFORGEN-based equipping strategy by focusing on modernizing and improving the interoperability of its equipment and emphasizing its procurement strategy on CDU equipment, which supports overseas wartime missions and HD and DSCA missions. The Army equipping strategy's stated goal is to equip the ARNG to 80 percent or better for its CDU items.

4. Modernizing the ARNG Helicopter Fleet

The UH-60 Blackhawk, LUH-72 Lakota, and CH-47D are CDU equipment and have a significant role in ARNG-supported overseas contingency operations (OCO) as well as HD and DSCA missions. The FY 2012 EOH percentages of rotary wing airframes are UH-60 29 percent, LUH-72 61 percent and CH-47D 9 percent. This EOH includes a mixed fleet of new production aircraft, older cascaded aircraft, and retiring legacy aircraft. The ARNG also continues to upgrade all ARNG UH-60A models to UH-60Ls to modernize the fleet in coordination with the changing AC UH-60 fleet. At the current UH-60 conversion rate, it will take until mid-2023 to fully modernize the UH-60A fleet. In FY 2010, the ARNG also began a new modernization initiative to convert a portion of its UH-60Ls to UH-60Ms.

5. Modernizing the ARNG Tactical Wheeled Vehicle (TWV) fleet

Although the Light Tactical Vehicle (LTV) fleet EOH percentage shows 100 percent, only 28 percent of the fleet is armor-capable, and only 35 percent of the fleet will be armor-capable by FY 2012. The remaining LTV fleet consists of legacy, non-armored vehicles that while capable of performing the HD mission, are not capable of performing full-spectrum operations. This is a significant modernization and interoperability issue for the ARNG.

With regard to the high-mobility multipurpose wheeled vehicle (HMMWV) fleet, the Army and ARNG's strategy is to modernize the fleet by maximizing recapitalization funding and technologies. The Army's HMMWV Recapitalization Plan, if approved, will allow the ARNG to extend the economic useful life of over 13,000 legacy HMMWVs that require recapitalization.

Medium Tactical Vehicles (MTVs) are the backbone of the ARNG's truck fleet and critical to performing domestic and OCO missions. The ARNG's MTV fleet lags behind the AC in both on-hand numbers and fleet modernization. Currently the ARNG's MTV fleet consists of a mix of modern and older legacy vehicles. The legacy M939-series vehicles range in age from 20–30 years old and are difficult to sustain due to the lack of available parts. Only 37 percent of the MTV fleet is modernized with Family of Medium Tactical Vehicles (FMTV) variants, and only 3 percent are armor-capable FMTVs. The estimated cost to pure-fleet FMTV is approximately $3.8B. For the Family of Heavy Tactical Vehicles (HTV), the FY 2012 requirement is 9,226 with 8,270 current on-hand. Although ARNG's HTV fleet EOH percentage is approaching 100 percent, the major focus is on replacing older HTV systems through recapitalization during the FY 2012-FY 2016 period. The estimated cost to modernize the entire HTV fleet for the ARNG is approximately $1.9B.

B. The Army Reserve (AR)

The Army Reserve has been and must be flexible, trained, and ready to deploy regardless of the ARFORGEN cycle a unit may be in. The Army has addressed many of Army Reserve shortages and has secured funding to procure critical AR requirements. However, the Army Reserve has an equipment shortfall of $3.9B, accounting for substitute items. All 10 equipment items listed in the Army Reserve's *Table 8 Significant Major Item Shortages* (provided in Chapter 2) are considered critical to seamlessly integrating the Army Reserve into the active force and impact its ability to perform domestic as well as overseas contingencies. Current shortages of modernized equipment include 86 percent of their armored LTVs, 51 percent of their light medium tactical vehicles, and 95 percent of their Standardized Integrated Command Post Systems (SICPS), which are part of the Army Battle Command System. Simulators and simulations are being used to efficiently and effectively meet ARFORGEN training aim point requirements, offset training impacts caused by equipment shortfalls, and mitigate limited access to adequate training areas. Regardless of the phase of ARFORGEN, for the Army Reserve to be operational, these systems must be available for OCO to support the combatant commander with trained and ready forces.

The Army Reserves' top equipment challenges are:

1. Equip Army Reserve formations to optimal operational levels for full-spectrum operations.

To effectively meet demands as an operational force and also be able to respond to HD/DSCA missions, the Army Reserve must be fully manned, trained, and equipped. As an integral part of the Army's team, the Army Reserve units and Soldiers require the most modern and capable equipment available to improve AR units' overall readiness posture and enable system interoperability and integration with AC counterparts.

 With 80 percent on-hand equipment and only 65 percent of it modernized, the Army Reserve still faces equipping challenges in terms of interoperability and integration of equipment within the current operational environment. Although, the Army Reserve has successfully met all OCO demands, it currently relies on theater-provided equipment (TPE) to complete modernized operational equipment requirements. As the Army Reserve moves away from their reliance on TPE, they must strike a balance between newly procured modernized equipment, Army Reserve depot/rebuild programs, less modernized equipment, and simulators. To properly meet ARFORGEN equipping aim points and account for equipment friction, the Army Reserve must have 100 percent of required equipment on-hand. Shortages of modernized equipment represent a risk in the ability of the Army Reserve to meet all current and future contingencies.

2. Increase equipment modernization in an era of decreasing resources.

Modernization efforts have significantly improved; however, the Army Reserve continues to have items, such as construction equipment, materials handling equipment, and tactical wheeled vehicles that exceed economic useful life and are not programmed to be modernized for many years. These older items increase operational and sustainment costs and result in a decrease in equipment serviceability rates. The Army Reserve receives and fields equipment each year to fill shortages and modernize as an operational force. In FY 2010, the Army allocated approximately $1.5B in base funding for Army Reserve equipment. This included $223M for the FMTV, $173M for Countermines, $116M for HMMWVs, $112M for Palletized Load Systems (PLS), $86M for Heavy Expanded Mobility Tactical Trucks (HEMTTs), $56M for Tactical Bridging and $52M for Construction Equipment. However, tactical vehicle modernization continues to be a challenge.

Congressional funding (NGREA) is important to support the Army Reserve in its role as an operational force; it offsets modernization shortages in the Army's new equipment procurement programs. It is an invaluable tool, making resources beyond the President's Budget available. Although 26 percent of the combat support, 41 percent of the combat service support, and 84 percent of the civil affairs & psychological operations structure in the Army resides in the Army Reserve; historically they receive less than 5 percent of the total new equipment procurement budget. Congressional funding significantly enhances equipment compatibility and interoperability with the AC through modernization while drastically improving EOH readiness percentages for critical equipment systems.

3. Modernize the Army Reserve Tactical Wheeled Vehicle (TWV) fleet.

The TWV includes LTVs, MTV, HTVs, and their associated trailers. By the end of FY 2012, the Army Reserve fleet is projected to be filled to the following requirement levels:

- LTV fleet is projected to be filled to 87 percent of requirements; however, only 14 percent will be modern armor-capable HMMWVs. The remaining HMMWV fleet will be comprised of older legacy, non-armored vehicles that, while capable of performing the HD mission, are non-deployable in support of Operations Enduring Freedom and New Dawn.
- MTV fleet is projected to be 97 percent filled; however, only 61 percent will be modernized.
- HTV fleet is projected to be 100 percent filled; however, the 20-ton Dump Truck is non-deployable in the current theater of operations, and the M915A5 Line Haul Tractor is only 34 percent modernized.

For the Army Reserve to deploy its forces with its most modern equipment requires equipment to be cross-leveled, thus jeopardizing future contingency mission success.

4. Gain full transparency for equipment procurement through unit level receipt.

In response to the CNGR 42 and 43 requirements, the Army Reserve is working with the Army to improve current equipment delivery and distribution processes to facilitate and enable the accurate and reliable accountability, transparency, and traceability of equipment distributions. Presently, transparency related processes are manually-intensive processes in which equipment delivery quantities are collected, processed, and officially documented on the Equipment Delivery Report. HQDA, G-8, in collaboration with the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA [ALT]) Program Managers, is hard at work to link the Material Inspection and Receiving Report or Department of Defense (DD) 250 with contracts and appropriations to Army Reserve equipment deliveries. Establishment of a systematic and automated process to capture information through HQDA and the ASA(ALT) databases is forthcoming. The use of Item Unique Identification (IUID) to link appropriations, contracts, and delivery of Army Reserve equipment is also a vital automated piece in development that will provide transparency and traceability throughout the entire process.

C. The United States Marine Corps (USMCR)

Over the last three years, the Marine Corps and its Reserve have improved Total Force integration and expeditionary capability. Through effective use of procurement funds the Marine Corps Reserve has continued to be an operationally effective force, capable of augmenting and supporting the AC whenever and wherever called.

The Marine Corps' equipping policy horizontally fields or integrates new weapon systems and equipment to ensure compatibility and the highest degree of interoperability between the AC and RC. Current operations continue to show the value in the Marine Corps' use of horizontal fielding. This allows Reserve Marines to train on the equipment they are using in theater and improves the seamless integration of the RC in support of the AC. Both the RC and the AC face two primary equipping challenges: outfitting units with the latest generation of combat equipment provided to U.S. forces in each theater and providing units with the "right amount" of equipment to effectively train their Marines in a pre-activation environment. The Marine Corps has alleviated many of these issues with continued reliance on training simulators.

The Marine Corps Reserve's top equipment challenges are:

1. Completing modernization of the Light Armored Vehicle (LAV) Family

 The LAV family is currently undergoing modernization to an improved A2 standard. Due to operational commitments, the Marine Corps has had to prioritize all A2-standard LAV distribution towards combat operations and units preparing to rotate in theater. In addition, the MCR has recently expanded its Light Armored Reconnaissance (LAR) Battalion from four to six companies. Because the LAV family of vehicles is a critical low density system, the MCR has made accelerated modernization a priority. The RC has used FY 2009 and FY 2010 NGREA funding to accelerate the fielding of upgraded LAVs to 4th LAR companies around the country. Currently 122 of 164 vehicles have been modernized or procured at the new standard. The Marine Corps will continue to prioritize LAVs towards operational commitments, and the remaining RC LAVs will be fielded as LAVs return from theater or NGREA funding becomes available.

2. Accelerating fielding of KC-130J to reduce AC/RC compatibility challenges

The KC-130J is a multi-role, multi-mission tactical tanker/transport aircraft developed to replace the KC-130F/R/T models. The KC-130J has increased range and speed, lower cost per flight hour, better fuel efficiency, improved reliability and better maintainability. The AC has completed the transition to the KC-130J leaving 28 KC-130T aircraft in the RC. Resource constraints have resulted in a delay of 4 years in the fielding of the KC-130J to the RC. Fielding is scheduled to begin in FY 2014 with the first three aircraft being delivered. Currently, there are only nine aircraft planned for the current FYDP and only 17 total aircraft between now and 2020. Compatibility differences between the KC-130J and KC-130T are creating significant challenges in training, manning, and logistical support of the KC-130T. Accelerating the RC transition to the KC-130J is a priority for the Marine Corps Reserve.

3. Rapidly fielding the Logistics Vehicle System Replacement (LVSR)

The LVSR is the Marine Corps replacement to the original Logistics Vehicle System (LVS), which is aged significantly and now comes with high maintenance costs. The LVSR provides improved performance, survivability, mobility, and diagnostics. The RC will use three basic variants of the LVSR: cargo, tractor, and wrecker.

The cargo variant, which is already in production, provides the capability to long-haul supplies and smaller equipment. The RC has used prior NGREA funding to procure 43 vehicles and an additional 33 are planned for baseline funding in the current FYDP. To meet its full training allowance, the RC will need an additional 57 vehicles at a cost of $22M.

The LVSR tractor and wrecker variants are both nearing their final production milestones. The RC will require approximately $21.5M to replace its LVS cargo and wrecker versions, and the RC fielding schedule is undetermined.

The LVSR is a critical component to future logistics capability and will become the only long-haul heavy-lift capability in the Marine Corps. Without it, the RC risks not having the capability to provide logistics across the battlespace.

D. The United States Navy Reserve (USNR)

The Navy has established a seamless and fully integrated Total Force. The RC is a force multiplier to the Total Force that can be used periodically and predictably, providing operational support when and where it is needed at a cost savings to the Navy. Within the Fleet Readiness Enterprise, each Navy Warfare Enterprise identifies RC requirements for new equipment as part of the Navy's resource-allocation process. This equipment is used to generate and sustain Fleet readiness during at-home training and forward-based operations and is ready to surge forward as combat replacement or capacity in response to a Request for Forces to be sourced by the Navy. Navy Reserve expeditionary forces have been heavily mobilized to the extent that authorized equipment needs modernization and replacement. Similarly, RC aviation squadrons have been utilized at higher than programmed rates due to ongoing overseas contingency operations, and the accelerated fatigue has created the need to recapitalize, all within a challenging budgetary environment.

The Navy Reserve's top equipment challenges continue to be:

1. Aircraft Procurement (C-40A, KC-130J, F/A-18E, JSF, E2-2D, E/A-18G, and P-8A)

The RC provides 100 percent of the Navy's organic intra-theater, medium-airlift capability for combatant commands worldwide, and airlift support to all military departments within the continental United States. The Navy Reserve's Fleet Logistics Support Wing consists of 15 squadrons operating C-40, C-9, C-20, C-37, and C-130 aircraft.

The Navy Reserve's Tactical Support Wing consists of six squadrons (1 E/A-6B, 1 F/A-18A+, 1 F/A-18C, 2 F-5F/N, and 1 E-2C), all with aging and under-equipped aircraft. These aircraft provide the most advanced adversary program within the Navy and also use veteran combat-skilled aviators to train our replacement aircrews and deploying carrier air wings while maintaining the ability to mobilize. These squadrons need recapitalization with the F/A-18E/F/G, Joint Strike Fighter (JSF), E-2D, and follow-on adversary platforms to sustain world-class adversary presentation and to be able to deploy in a joint environment.

C-40A: Replacement of the aging C-9B aircraft with the C-40A is a critical RC requirement. The goal of the Navy C-9B aircraft replacement program, initiated in 1997, is to replace the original 27 aging DC-9 and C-9B transport aircraft with 17 C-40A aircraft. To date, 12 C-40A aircraft have been procured. A requirement for 5 more has been identified in the *Naval Aviation Plan 2030*.

KC-130J: Procurement of additional C-130 aircraft to meet the *Naval Aviation Plan 2030* requirement and replacement of the aging and maintenance-intensive C-130T aircraft with the KC-130J are critical RC capability enhancements. C-130 aircraft are a critical part of the Navy Unique Fleet Essential Airlift mission; they serve as a connector between strategic airlift points and the Carrier Onboard Delivery and Vertical Onboard Delivery to the fleet, and specialize in oversized cargo with tanking capability.

F/A-18E and JSF: The Navy is seeking to recapitalize the RC legacy Hornet squadrons with an F/A-18E squadron and a JSF squadron. The F/A-18E and JSF will provide sustainable platforms to meet the Navy's vision of future warfare capabilities. As the Navy tactical aircraft fleet

shrinks and ages, there is a significant dependence on the remaining RC F/A-18 aircraft, which comprise 24 percent of the Navy's adversary capability and 52 percent of the radar-capable adversary sortie requirement. The F/A-18E and JSF will provide sustainable platforms enabling the full spectrum of capabilities, including adversary, in the near and long term.

E-2D: Operating six 18 year-old E-2C aircraft, the RC is pursuing a recapitalization plan to transition the squadron to the E-2D Advanced Hawkeye by 2022. The E-2D brings a unique advanced radar package which is highly suited to the Northern Command missile defense mission and would allow the RC squadron to appropriately surge as an active duty squadron if a carrier strike group mobilization was directed.

EA-18G: Replacement of the EA-6B Prowler aircraft with the EA-18G Growler is required to continue RC Fleet electronic attack (EA) capability. RC EA-6Bs were previously scheduled to retire by 2012 coincident with expiration of the expeditionary EA requirements; however, recent direction proposing an extension of the mission past 2014 includes the RC capability. This extension provides increased viability to the Reserve EA-18G recapitalization plan.

P-8A: Twelve AC squadrons are programmed to transition to the P-8A aircraft beginning in FY 2012. RC combat aircrews will continue to train and execute front-line missions ensuring the maritime patrol aircraft community's ability to satisfy combatant commander (COCOM) requirements while the AC fleet transitions to the P-8A. During the AC fleet transition, the Navy is pursuing a plan to replace the RC legacy P-3Cs with 12 P-8As. The recapitalization of RC legacy P-3C with the P-8A is necessary to provide the required number of aircrews and aircraft to fill the most-stressing combat action requirements.

2. Expeditionary Equipment Procurement (MESF, EOD, NCF, NAVELSG, MCAST, EXPCOMBATCAM, and NEIC)

Modernization and recapitalization of Maritime Expeditionary Security Force (MESF), Equipment Ordnance Disposal (EOD), Naval Construction Force (NCF), and Navy Expeditionary Logistics Support Group (NAVELSG) equipment through baseline, OCO, and NGREA funding has filled critical equipment gaps, but $290M of funding is still required for the full modernization of the RC units over the FYDP. Significant amounts of table-of-allowance equipment, civil engineering support equipment, and materials handling equipment in these forces are at the end of service life and fully depreciated, and require a significant capital investment to increase materiel and operational readiness for the expeditionary forces.

Reserve forces in the Maritime Civil Affairs and Security Training (MCAST) Command, Expeditionary Combat Camera (EXPCOMBATCAM) organization, and the Navy Expeditionary Intelligence Command (NEIC) do not have equipment and rely on AC equipment to train and deploy.

E. The Air National Guard (ANG)

Currently, the Air National Guard has an unprecedented support equipment readiness rating of 92 percent, as compared to rates of 84 and 88 percent just a few years ago. This rate is comparable to the overall Air Force availability rate and is achieved through the ANG and Air Force's teaming to equip the ANG as an operational force. Equipment priorities are determined

in a Total Force environment, where the forces with the most pressing operational need get first priority, no matter which component owns those forces. Although the equipment readiness level is an aggregate 92 percent of authorized equipment, pockets of shortages do exist. The challenge is to obtain the assets that are most critical for the warfighter and military first responder for homeland operations. Approximately 88 percent of the assets the ANG possesses are considered "dual-use" (federal and DSCA missions).

While support equipment levels remain comparable to Air Force levels, Congressional funding, including NGREA, has been vital to ANG modernization efforts. With the need to fully fund ongoing operations and continued pressure on defense budgets, obtaining adequate funding for procuring equipment and modernization efforts is a challenge. Without continued and adequate funding from Congress, the ANG will be unable to modernize legacy platforms and equipment and will no longer remain an equal and effective partner in the Total Force.

The ANG's top equipping challenges are:

1. Modernizing aging aircraft and other weapons systems for both dual-mission and combat deployments

The operations tempo for the ANG has been high and prolonged, driving a need to concurrently modernize and recapitalize our aircraft fleets, a need shared by the AC. The ANG's modernization efforts are founded on capability requirements validated by the Air Force and combatant commanders. Critical capabilities are developed and vetted in an open and rigorous forum of war fighters, who are experts in their respective weapons systems, at an annual Weapons and Tactics Conference and approved by the Director, ANG. The capability requirements are translated into specific programs that are commercial or government off-the-shelf, and require only non-developmental integration into a weapons system. The process includes command and control, intelligence, surveillance, and reconnaissance systems as well as weapons delivery, airlift, and tanker platforms. The ANG has documented a $7B shortfall for modernization of its aircraft fleet in the *ANG 2012 Weapons Systems Modernization Requirements* book.

2. Equipment to satisfy requirements for domestic operations in each Emergency Support Function

In August 2010, the ANG hosted its second annual Domestic Operations Equipment Requirements (DOERs) Conference. The objective of the conference was to define, validate, document, and prioritize materiel capabilities needed by ANG units to support civil authorities at all levels of government. Over 400 experts from all 54 states and territories as well as experts from staff agencies and leading defense contractors used a bottom-up approach to determine capability shortfall prioritization. These experts defined both materiel and non-materiel needs using the Department of Homeland Security's (DHS's) Emergency Support Functions (ESFs) functional alignment. The ANG will use the direct output from these conferences to publish the annual "Domestic Operations Equipment Requirements (DOERs) Book." The DOERs Book is organized using the ESFs of the National Response Framework to ensure the states, federal and state agencies, Congressional leaders, and National Guard Bureau staffs understand the connections to local communities and states. It will serve as the source for rationale for

supporting informing both DoD and DHS budgeting processes as well as serve as the list from which other funding received by the National Guard can be prioritized.

3. Define an Air Force validation process for both Federal and State domestic response needs

National Guard Support of Civil Authorities (NGSCA) refers to the use of National Guard personnel and resources for operations conducted under Title 32, or in support of state missions. The equipment used by the Guard to support these state missions is the same equipment used to support federal missions. NGSCA is considered a subset of DSCA as defined in the National Response Framework. Ongoing overseas commitments and expanding domestic responsibilities for the ANG have resulted in the ANG responding to international disasters, like Haiti, along with responses to numerous domestic disasters throughout the country, while continually augmenting the AC with an operational force for contingencies around the globe, including Iraq and Afghanistan.

The ANG provides almost half of the Air Force's tactical airlift support, combat communications functions, aeromedical evacuations, and aerial refueling. In addition, the ANG currently has the responsibility for 16 of 18 air defense operations for the 54 states and territories of the United States. When ANG units are not directly supporting the Air Force, the ANG under the provisions of state laws, provides protection of life and property and preserves peace, order, and public safety. The ANG accomplishes these missions through emergency relief support during natural disasters, such as floods, earthquakes, and forest fires; search and rescue operations; support of civil authorities; maintenance of vital public services; and counterdrug operations. To that end, the ANG has continually been called upon to support state governors and civil authorities for border patrols, hurricane relief, firefighting efforts, floods, earthquakes, and diverse security operations for events, such as Super Bowls and Presidential inaugurations.

The Air Force validation process for both federal and state domestic response remains a challenge, because DoD programs resources for homeland defense and global missions to meet COCOM requirements. Consequently, the ANG equips itself to meet domestic missions with the secondary capability of COCOM-tasked equipment on-hand—equipment not optimized for the domestic challenges. There has been some progress in the wake of the SecDef emphasis on domestic missions. However, the ANG must remain engaged on the issue to ensure a comprehensive process for meeting the complex and growing needs of domestic mission areas.

F. The Air Force Reserve (AFR)

In recent years, the AFR has seen a shift from strategic to more operational capabilities with the continued responsibility of maintaining a strategic depth. It is increasingly relied upon to support the requirements of the Air Force and combatant commanders. Because of this shift, the equipment requirements of the AFR have increased dramatically.

Over the last year, the AFR has greatly increased capability of AFR combat air forces (CAF) through modernization that added secure line-of-sight/beyond line-of-sight (SLOS/BLOS) and data link communications, digital data recorders, advanced digital/analog secure video data link to ground forces, and improved weapons employment in the F-16, A-10A+/C, HH-60, HC-130, and B-52. On the AFR mobility air forces (MAF) side, the AFR has significantly enhanced

combat defensive capabilities in both strategic and tactical airlift, to include combat search and rescue platforms, C-5 armor kits, C-130/HC-130 Large Aircraft Infrared Countermeasures (LAIRCM), improved all-weather situational awareness, C-130 APN-241 radar, and C-17A palletized seats.

Over the next year, the AFR will complete addition of SLOS/BLOS communications for all AFR fighters, provide permanent tactical data link for AFR combat search and rescue assets, introduce fourth generation LITENING Advanced Targeting Pod sensors and capabilities on AFR A-10A+/F-16/B-52 platforms, continue to advance airlift defense capability with C-130 SAFIRE tactical lookout, and start installation of C-5 Airlift Defensive Systems (ADS). AFR space aggressors will receive a new Integrated Multiple Antenna Terminal Electronics (IMATE) satellite communication (SATCOM) jammer in support of their mission, moving away from GPS-jamming and towards SATCOM-jamming. Likewise, new SATCOM control training suites will allow our space controllers to be fully trained before deployments.

The AFR annually publishes Equipment Modernization Roadmaps as formal documents that are the culmination of a formal AFR requirements process. This process begins at the squadron level and is finalized at the command through the Corporate Structure. Air Force Reserve Command Corporate Structure Panels receive the AFR MAF, CAF, and Agile Combat Support requirements, rank requirements, and forward them through the Corporate Group and council for approval of unfunded requirements. Available funding only covers a small percentage of equipment requirements for the AFR. Recent finalized Procurement Unfunded Requirements Lists total approximately $960M.

The AFR's top equipping challenges are:

1. Defensive Systems

AFR aircraft that lack adequate infrared missile protection for combat operations need to be equipped with defensive systems, which include LAIRCM, ADS, and the AAR-47 Missile Warning System. AFR aircraft require self protection suites that are effective against modern anti-aircraft missile systems.

2. Data Link and Secure Communications

Data-link networks supporting image/video, threat updates, and SLOS/BLOS communications are needed for combat missions. The information demands of modern warfare require a fully integrated data-link network.

3. C-5 Maintenance

Reduced aircraft availability is projected for the C-5 fleet due to major maintenance issues (structural cracks) and reduced Weapons System Sustainment (WSS) /Depot Purchased Equipment Maintenance (DPEM) funding. Structural issues within the C-5 fleet are a significant concern: aircraft crown skins, contour boxes, and batman fittings are developing corrosion cracks that, if not addressed, will result in a significant reduction in aircraft availability beginning in FY 2013. Approximately $176M is required; $44M beginning FY 2012–FY 2015.

G. The United States Coast Guard Reserve (USCGR)

The Coast Guard Reserve provides the Coast Guard highly trained and well qualified personnel for active duty in time of war and national emergency, and for augmentation of Coast Guard forces during natural or man-made disasters or accidents. The Coast Guard Reserve provides the Coast Guard surge capacity and flexibility to respond to all threats and all hazards. The Coast Guard's Reserve force stands ready to perform three core strategic functions: maritime homeland security, domestic and expeditionary support to national defense, and domestic disaster response and recovery. Approximately 80 percent of the Selected Reserve force is directly assigned to AC units. The remaining 20 percent is assigned to the Coast Guard's 8 port security units or to DoD units and staffs.

The DHS budget provides equipment for Coast Guard domestic operations. Coast Guard AC units provide equipment for mobilization for surge operations, from existing unit inventories, supporting units, or through procurement procedures using the DHS budget. The Coast Guard AC owns and manages all Coast Guard equipment, including reserve-centric equipment. DoD provides specific equipment for the Coast Guard to perform defense operations in support of the COCOMs. This equipment 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.

USCGR equipment concerns include:

1. Personal Protective Equipment

Approximately 62 percent of the Coast Guard reservists have mobilization missions requiring the wear of personal protective equipment (PPE) to safely conduct operations. Coast Guard unit operations and maintenance budgets provide PPE for all Coast Guard personnel. The Coast Guard Reserve has an estimated Reserve PPE shortfall of $500K per year. The absence of required PPE directly impacts Reserve mobilization readiness. Reservists who are not properly outfitted are typically unable to perform Coast Guard operations, and thus, unable to achieve or maintain their mobilization competencies.

2. Defender-class Response Boats

Ten small boat stations do not have a Defender-class response boat available for training. The absence of a Defender-class boat, costing $192K per boat, impacts the mobilization readiness of reservists assigned to those 10 units.

Chapter 2
United States Army Reserve Components

I. Army Overview

A. Army Planning Guidance

Barely a decade into the 21st Century, its perils and challenges are increasingly evident. The events of September 11, 2001 shattered the United States' sense of domestic invulnerability to external threats. Since then, we have been at war—the longest war in our nation's history—waged with an All-Volunteer Force. Over one million have served in the campaigns in Afghanistan and Iraq, and over 5,500 (as of August 2010) of our Soldiers, Sailors, Marines, Airmen, and Civilians have sacrificed their lives.

These opening engagements of the 21st Century are harbingers of the emerging security environment. In the years ahead, the United States will confront complex, dynamic, and unanticipated challenges to our national security and the collective security of our friends and allies. These challenges will occur in many forms and will be waged across the spectrum of conflict—from peaceful competition to general war and at all points in between—and in all domains: land, sea, air, space, and cyberspace.

To succeed in this new environment, the Secretary of Defense (SecDef) has reinforced the principle of balance in our defense strategy: balance between winning the current war and hedging against future threats; balance between conventional and irregular capabilities; and balance between the cultural advantages that have given us security vice the cultural changes needed to preserve it.

The enduring mission of the Army is to provide forces to fight and win our Nation's wars in prompt and sustained operations across the spectrum of conflict in support of combatant commanders and Title 10 directives. To meet this requirement, we see four roles for our Army in the 21st Century: prevail in protracted counterinsurgency campaigns; engage to help other nations build capacity and to assure friends and allies; support civil authorities at home and abroad; and deter and defeat future threats from state and non-state actors.

To accomplish our enduring mission, we need an Army that is a versatile mix of tailorable and networked organizations, operating on a rotational cycle, to provide a sustained flow of trained and ready forces for full spectrum operations and unexpected contingencies—at a tempo that is predictable and sustainable for our All-Volunteer Force. To achieve this, we must continuously adapt our force and its supporting institutions.

B. Army Equipping Policy

The revised Army Equipping Strategy for FY 2011 continues to encompass three major efforts to manage the equipping of all Active Component (AC) and Reserve Component (RC) units. The first one, focusing on the unit, is Unit-based Equipping; the second, called Managing Friction, focuses on seeing where all equipment is and making informed equipping decisions; and the third, Building Enduring Readiness, targets the institutional processes. This strategy provides a framework for full partnership between the Active Army, Army National Guard (ARNG), and

Army Reserve (AR), effectively managing the limited equipment resources to meet mission requirements.

The Army Campaign Plan continues to drive the Unit-based Equipping Line of Operation. The Army Campaign Plan includes planning guidance for a balanced fielding of equipment to both AC and RC units to achieve timely and progressive operational readiness for the Army. The Army is closer to achieving a balance between the demand and supply of U.S. Army land power. The ARNG and Army Reserve are performing magnificently in their new capacity as an operational force, a role for which they were not originally designed or resourced. The Army Force Generation (ARFORGEN) process aims to resource their requirements through increased cycle time for RC units and by properly equipping them to meet their obligations in support of warfighting requirements, homeland defense (HD), and defense support of civil authorities (DSCA).

The Army's equipping goal is to ensure that Soldiers always have the equipment they need to execute their assigned mission as they progress through the cyclic readiness model. Equipment is aligned to properly equip today's formations as they progress through the ARFORGEN phases of cyclic readiness, entering and exiting the Available phase on a rotational basis, from the Reset phase which requires minimal equipment, through the Train/Ready phase in which units are equipped to conduct collective training and provide operational depth, to the Available phase in which units have their full equipment set in accordance with their Modified Table of Organization and Equipment (MTOE) or are equipped to a Mission Essential Equipment List (MEEL) for the conduct of a Deployment Expeditionary Force mission.

The Managing Friction Line of Operation measures how well the Army can see its equipment inventories and make informed management decisions about how to allocate that inventory to build Army readiness, while meeting the goals established in the Unit-based Equipping Line of Operation and determining if new equipping goals are feasible over time.

"Friction" relates to that portion of equipment that is unavailable to fill MTOEs, because it is in transit or reset. The Army uses five key means to manage friction:

- The Army must normally procure to the Army Acquisition Objective (AAO). Procuring to AAO provides the Army the ability to mitigate friction and meet the ARFORGEN equipping requirements.

- The Army will continue to pursue full transparency and asset visibility in its equipment inventories.

- The Army will ensure that equipment it allocates to equipping sets is included in its overall readiness reporting.

- The Army fosters effective equipment stewardship to ensure accountability for assigned equipment.

- An ARFORGEN-based Army, operating in an era of persistent conflict, will always have some portion of its equipment in reset.

The Building Enduring Readiness Line of Operation will increase the Army's ability to improve the utility of equipping goals and guidance over time as we improve our understanding of how varying levels and types of equipment affect Army readiness in all phases of ARFORGEN. This enables the Army to bring resources and requirements into synchronization with cyclic equipping readiness requirements.

C. Plan to Fill Mobilization Shortages in the RC

The Army ensures units are always equipped to their mission. The Army equips all units, regardless of component, equally as they progress through the ARFORGEN phases. AC and RC units of like MTOEs, assigned like missions, will receive the same equipment. Army units, particularly ARFORGEN-rotational units, will not always have their full MTOE set of equipment; however, the Army mitigates equipment shortages through the use of Pre-deployment Training Equipment (PDTE) sets and theater-provided equipment (TPE). PDTE is pre-positioned at key Mobilization Force Generation Installations (MFGI) in support of individual and collective training requirements. Camps Shelby and Atterbury are the two primary MFGIs for the ARNG, and Forts Dix and McCoy are the two primary MFGIs for the Army Reserve. MFGIs have robust equipment sets, including Mine Resistant Ambush Protected (MRAP) vehicles, to facilitate individual and unit training prior to deployment. TPE sets are forward in the theater of operations. They comprise theater-specific equipment that units need for overseas contingency operations (OCO). Maintaining TPE in theater minimizes the cost and friction of deploying the equipment back and forth with returning and deploying units, respectively. These methods of managing friction ensure the equipment is available for training and mission execution.

D. Initiatives Affecting RC Equipment

1. Current Operations

Although the Army's operational tempo in support of OCO has lessened as a result of the drawdown in Iraq, it still places a strain on the force, including the RC. One advantage ARFORGEN gives the force is predictability and early identification of when units will deploy. Based on the ARFORGEN cycle, unit equipment goals are met prior to mobilization and in the theater with TPE. Aim points provide the Army a means to meter resources to units to achieve a prescribed state of readiness as they move through the ARFORGEN force pools. They allow Army leadership and force providers to make accurate, timely decisions to mitigate risk on manning, equipping, and sourcing in accordance with Army priorities. When the Army moves to Boots on the Ground (BOG): Dwell ratios of 1:2 (for the AC) and 1:4 (for the RC), the strain on personnel will reduce. Counterintuitively however, the strain on equipping will increase due to increased need for equipment caused by longer Train/Ready phases. The Army will continue to equip to mission, but equipment deliveries may stretch over longer periods. Regardless of the BOG: Dwell ratios, the Army is committed to ensuring that RC units are equipped to execute their HD and DSCA missions as well as their operational requirements. To this end, Headquarters, Department of the Army (HQDA) and ARNG define, validate, and continually update the Critical Dual Use (CDU) equipment list identifying those MTOE items necessary for the accomplishment of the RC's Title 10 and Title 32 missions. The minimum acceptable level of CDU equipping is 80 percent on-hand. This provides a sufficient pool of equipment that, within the constraints of overall Army equipping levels, meets the goal of ensuring that the RC always have the equipment necessary to meet domestic operational requirements. To bring the RC capabilities in line with

future demands, five focus topics are outlined as follows: Operationalizing the Reserves, Transparency, Homeland Defense, Reset, and What We Bring to the Fight.

2. Operationalizing the Reserves

Meeting OCO demands for forces required transforming the RC from a strategic reserve to an operational force. The Chief of Staff, Army has stated that we must adapt our RC by transforming it from a strategic reserve to an operational force routinely employed at home and abroad. Transforming the RC requires national and state cooperation, as well as continued commitment from employers, Soldiers, and families. It necessitates changes in the way we equip, train, mobilize, and sustain the RC.

There are four critical readiness components to operationalizing the ARNG and the Army Reserve on a sustained basis: personnel, equipment, training, and leadership. Pre-mobilization training is of paramount importance. It shortens post mobilization training time and optimizes operational time. Our goals are to fully equip our units to accomplish their missions, whether that is to a MEEL for deployment to theater or to their MTOE if they are a contingency response force. The Army will ensure they have the right training equipment in advance of need or mobilization.

3. Transparency

The Army continues to move forward in improving procurement transparency. The FY 2008 National Defense Authorization Act recognized the need for transparency and traceability. This act mandated the Chief, National Guard Bureau verify the National Guard received the equipment from the funds allocated to that organization.

Prior to FY 2003, the Army did not track procurement funding sources at the component level. The Army is committed to resolving this issue and ensuring full transparency. To achieve this goal, the HQDA G-8 assembled a team with expertise in process documentation; the Planning, Programming, Budgeting, and Execution System; and the acquisition cycle. Through a collaborative effort, this team documented all of the steps in the procurement process from budget submission through equipment delivery to the unit. This effort identified several areas for improvement to bring about better transparency.

To close transparency gaps and facilitate full transparency, the Army created two teams: the Financial Synchronization and Transparency (FST) and the Delivery Certification Integrated Product Teams (IPTs). The FST IPT focuses its efforts on correlating equipment to the correct fiscal year appropriation. The Delivery Certification IPT concentrates its efforts on recording equipment deliveries to units and ensuring all receipts are properly recorded in the respective unit's property book.

Over the past year, the Army has expanded its collections of procurement data from 30 to 84 programs; producing quarterly Equipment Delivery Reports. For FY 2009 and FY 2010 procurement-funded programs being tracked; the transparency delivery reports have recorded the delivery of over 60,000 major end items to the ARNG and AR. As data collection processes and reporting continue to evolve, the ARNG and AR remain full partners in all phases of development. Additionally, the Army has improved the Congressional Budget Justification

document review process to ensure synchronization of component-level funding and equipment quantities between the P-1R and the P-40 budget exhibits. During the FY 2012–2015 Program Objective Memorandum (POM) development and the FY 2010 Mid-Year Reviews, component level funding allocations were transparent and collaboratively reviewed to ensure the identification and explanation of significant allocation adjustments.

Over the next year, the Army will continue expanding the collection of data for all procurement programs (less ammunition) involving the planning of component-level funding and meeting criteria set forth in the Office of the Secretary of Defense (OSD) implementation guidance. The Army is moving forward to institutionalize periodic allocation reviews associated with the Budget Estimate Submission and the President's Budget. Additionally, the Army is exploiting the use of Item Unique Identification (IUID) on equipment and in property and invoice records to provide systematic traceability for transparency of delivery data. While the data collection process is mostly manual and manpower intensive, the Army continues to automate the collection process and is developing plans to integrate transparency into the existing systems.

4. Homeland Defense

The Army is playing an ever increasing role in HD. In accordance with direction from the Chairman, Joint Chiefs of Staff, the Army provides the bulk of the Defense Chemical, Biological, Radiological, Nuclear, and High-yield Explosives (CBRNE) Response Force (DCRF) for FY 2012 and beyond. The Army provides specific capabilities for federalized military assistance to civilian agencies, such as the CBRNE Consequence Management Response Force (CCMRF), in the event of an attack against the United States or in the event of a manmade or natural disaster. These capabilities come from all Army components in support of U.S. Northern Command's (NORTHCOM's) mission to support civil authorities in the event of a disaster.

The equipment used by the RC to respond to emergencies in a CCMRF and DCRF capacity or DSCA mission is dual use equipment that comes primarily through base budget procurement by the Army and commercial off-the-shelf equipment procurement by the Army Reserve. It is also equipment that has been cascaded from the AC to the RC.

It is the AR policy to generate response forces when called upon to do so using existing equipment from within the chain of command of the units called and only cross-level outside of the organization when necessary to maintain readiness. Although the AR's equipping policy mirrors HQDA's 2009 Equipping Strategy of equipping our formations according to the ARFORGEN model, maintaining the on-hand balances of AR-identified CDU equipment is an AR readiness priority to ensure the AR has sufficiently equipped units to support DSCA missions. While cross-leveling equipment allows the AR to meet the immediate mission readiness requirements of its formations, it cannot be the sourcing solution if the AR is to maintain itself as a relevant operational force. The AR's priority is to have 100 percent of its modernized equipment funded in the budget process, so that it is able to equip its formation through the ARFORGEN cycle and meet contingency operations, such as DSCA.

In FY 2010, the Army Reserve provided 35 units in support of the CCMRFs. These units range in size from a four-Soldier detachment to a brigade-sized headquarters. The Army Reserve's contribution to this enterprise included various chemical, medical, transportation, aviation, quartermaster, and engineer formations. Units sourced to support this mission are doing so for

three years: one year training and two years operational. During the training year, units participated in tactical level exercises evaluated by U.S. Army North personnel. Additionally, headquarters units, battalion-size, and larger participated in a NORTHCOM -sponsored Command Post Exercise. During the operational years, all Army Reserve CCMRF and DCRF units will participate in one annual field training exercise (14-day duration), which revalidates the unit for the subsequent operational year.

During FY 2010, the Army Reserve and ARNG deployed Soldiers and equipment to provide support of civil authorities in the following emergencies: Hurricane Ida (November 2009); establishment of two Regional Joint Task Forces for Pandemic Influenza (November 2009); Midwest flooding (March 2010); Northeast flooding (April 2010); Deepwater Oil Spill (the largest oil spill disaster in U.S. history) (April 2010); and Hurricane Alex (June 2010). At the peak of the response, the ARNG provided almost 2,000 Soldiers to Operation Deepwater Horizon.

5. Reset

Reset includes all those activities that return previously deployed equipment to at least full mission-capable (FMC) standards, some with upgraded capabilities. The reset process incorporates critical materiel lessons learned from OIF and OEF, e.g., installing protective armor on HMMWVs (high mobility multipurpose wheeled vehicles). Units are reorganized to modular designs, obsolete equipment is replaced, and pre-positioned stocks are reconfigured to be more strategically relevant and responsive.

The Army is working with the ARNG and AR to improve the reset process for returning equipment by improving visibility of equipment within the process. As much equipment as possible is retained by the units to facilitate individual training in preparation for the Train/Ready stage and to ensure that as much CDU equipment as possible is returned to the states. This is important as we prepare to meet requirements for global contingencies and military support of civil authorities within the United States.

6. What We Bring to the Fight

The last nine years have highlighted the significant role the RC have in HD and have proven how essential they are to executing the national defense strategy. The RC are operational components of the Army and, as such, have served shoulder to shoulder with AC Soldiers in Iraq and Afghanistan. They serve in the Sinai, and they comprise virtually the entire Balkan contingent. The RC provides combat units, combat service support (CSS) forces, special operations Soldiers, and unique capabilities critical to the Army's success.

The RC is a full partner in national defense, meeting the challenges not only of today, but of the future. To meet the future requirements, the Army has significantly accelerated the tempo of transformation and continues to adapt the resourcing processes to become more flexible, dynamic, transparent, and responsive.

E. Plan to Achieve Full Compatibility between AC and RC

The ARNG and Army Reserve are operational components and they can expect to serve alongside AC units in any theater. The Army equips all ARFORGEN units with the most modern

and most capable equipment available, based on the units' mission. Because of this, the ARNG and Army Reserve units receive the same equipment as their AC counterparts when assigned similar missions.

The Army is also committed to fulfilling its DoD Directive (DoDD) 1225.6 requirements to replace RC equipment transferred to the AC. In FY 2010, the Army reduced the number of items owed the RC from over 85,000 items to fewer than 13,000. To ensure transparency, any new requirements must be accompanied with a Memorandum of Agreement signed by both the AC and RC and approved by the SecDef, and repayments are tracked item by item.

II. Army National Guard Overview

A. Current Status of the Army National Guard

1. General Operational Overview

The ARNG participated in numerous OCO and domestic missions in FY 2010. As of August 2, 2010, 3,554 ARNG Soldiers were mobilized and supporting domestic missions, such as the Southwest Border security mission, the Deepwater Horizon Oil Spill Cleanup, and support to various flooded areas. The ARNG had 8,039 Soldiers supporting five OIF/Operation New Dawn (OND) rotations; 7,802 Soldiers supporting three OEF rotations; 721 Soldiers supporting Stabilization Force Bosnia; and 1,071 Soldiers supporting the Multi-National Force Observer mission. The ARNG had 36,279 Soldiers deployed outside the continental United States (CONUS) in all of the major combatant commands; 40,528 ARNG Soldiers (11 percent) were deployed in total.

Top ARNG Equipping Challenges

- Modernizing the ARNG tactical wheeled vehicle (TWV) fleet
- Improving interoperability with AC forces
- Achieving full component-level transparency for equipment procurement and distribution
- Equipping ARNG units for pre-mobilization training and deployment
- Equipping ARNG units for their homeland missions
- Modernizing the ARNG helicopter fleet

The ARNG is continuing to posture itself towards the Army's full-spectrum ARFORGEN-based Equipping Strategy by focusing on modernizing, improving the interoperability of its equipment, and emphasizing CDU equipment, which supports overseas wartime missions and HD/DSCA missions in its procurement strategy. Over the past year, the ARNG received 96,904 new items of equipment valued at $8.76B. With this new equipment, the MTOE equipment on-hand (EOH) percentage has risen to 77 percent, and the ARNG currently has 83 percent of its CDU equipment on-hand.

Over the past year, the ARNG has made significant improvements in modernizing the tactical wheeled vehicle (TWV) fleet. Upon the award of a new DoD Family of Medium Tactical Vehicles (FMTV) contract, the ARNG has been able to utilize $244M of National Guard and Reserve Equipment Appropriation (NGREA) funds to purchase 1,576 FMTV. This is the first time since 2006 that the ARNG has been able to place NGREA funds on a FMTV contract. The ARNG has committed an additional $266M of NGREA funds that is currently being processed to procure 1,173 more FMTV. Since FMTV continue to play an integral part in most National Guard missions and are one of the mainstays of CDU equipment, the ARNG will continue to focus efforts on procuring FMTV in the coming year to replace the aging TWV fleet.

Noteworthy modernization efforts were also achieved with the Blackhawk UH-60 helicopter fleet and Blackhawk medical evacuation (MEDEVAC) helicopters. During FY 2010, the ARNG converted all legacy UH-1 MEDEVAC companies to 6 new UH-60 MEDEVAC companies inserted into the Theater Aviation Brigades' General Support Aviation Battalions (GSAB). This doubled the ARNG MEDEVAC capability for each of the 5 ARNG GSABs. Additionally, the

ARNG grew from 15 MEDEVAC companies to 21 (of the 37 companies across the Army). The ARNG also continued to upgrade all its UH-60As to UH-60Ls to modernize the fleet in coordination with the changing AC UH-60 fleet. A new AC modernization initiative to convert UH-60Ls to UH-60Ms also began within the ARNG in FY 2010.

NGREA dollars committed for Tactical Battle Command Systems will help improve interoperability with the AC. The ARNG invested NGREA dollars in CDU systems, such as the Tactical Operation Combat System (TOCS), Standard Integration Command Post System (SICPS), and Warfighter Information Network-Tactical (WIN-T). Through this commitment, the ARNG spent $235M to purchase SICPS and Command Post Platform (CPP) hardware and software products to field over 47 brigade/battalion level units. This capability provides standardized communication infrastructure for commanders and staff to digitally plan, prepare, and execute operations related to their mission. Future NGREA funds will continue to focus on the procurement of high-priority CDU items that have a projected shortfall.

In addition, the ARNG is currently on schedule to field WIN-T at 100 percent of its identified requirements by 2nd Quarter FY 2012. WIN-T will help improve command and control (C2) by providing communications capabilities down to the battalion level for such things as real time internet access and the ability to send and receive voice, data, video, and images using both commercial satellite technology and commercial internet networking technology.

a. Status of Forces as an Operational Force

There have been significant improvements in equipping and modernizing the RC as an operational force to include: additional funding ($37.76B in equipment from FY 2005–FY 2010 versus $5.71B for the previous four years), an improved EOH (69 to 77 percent), an improved CDU EOH (65 to 86 percent), and increased modernization. However, strategy and policy is still evolving that defines what an operational force is or how the ARNG will be equipped as such, especially when resources become constrained. The proposed ARNG definition of an operational force is "a reserve of operational capabilities organized and resourced in a recurrent predictable cycle to support Army requirements, in peace and war. An operational force is fully manned, equipped, and trained to provide ready units across the full spectrum of operations." The recurrent predictable cycle is the Army's ARFORGEN cycle, in which units pass through three phases: Reset (equipment and Soldiers are being reset), Train-Ready (units are training for possible deployments and receive equipment to support training requirements), and Available (units are equipped to 90 percent+ of requirements and are available to deploy). As an operational force, the ARNG will continue supporting overseas wartime missions, its domestic missions, and the state partnership program in countries around the world.

The ARNG estimates it needs $3.5–$4.5B in annual programmed funding (versus a $2.3B per year average in the current Future Years Defense Program [FYDP]) to continue to modernize and maintain current EOH levels and interoperability. This figure is derived from the $4M average level of funding from FY 2008–FY 2016 plus additional funds needed to close the 5 percent gap in modernization between the AC and ARNG. The ARNG and AC have roughly the same EOH; but the ARNG trails the AC modernization level through the FYDP by 2–6 percent. As Basis of Issue Plans (BOIPs) are applied, and component splits to funding and equipment allocations are codified in the database, the estimate for ARNG programmed funding increases from the $2.3B FYDP average annual funding.

b. Homeland Defense/Homeland Security/Defense Support of Civil Authorities

In April 2010, the ARNG responded to the largest oil spill disaster in U.S. history. Four states (FL, AL, MS, and LA) have shoreline in the Gulf of Mexico affected by the spill. At the peak of the response, there were 1,877 Army National Guardsmen working in support of the Deepwater Horizon oil spill. The mission continues with more than 1,000 Guardsmen still on Title 32 active duty providing C2, communications, engineering, public affairs, aviation, and security support.

In July 2010, the President of the United States authorized 1,200 National Guardsmen to support the homeland security (HS) mission along the Southwest Border. Almost 1,000 Army National Guardsmen from TX, NM, AZ, and CA will provide C2, entry identification teams, and criminal investigative analysts in support of U.S. Customs and Border Patrol operations.

c. New Programs and Initiatives

i. Defense CBRNE Response Force

There are two DCRFs, a Theater Aviation and a General Support Aviation Brigade, designated to provide federalized military assistance to a lead federal agency in the event of a CBRNE attack in the homeland.

ii. Domestic All Hazards Response Team (DART)

The DART was established to support the National Guard's Title 32 (state) response to all hazards by utilizing the unique capabilities of a Division Headquarters (HQ) for planning and coordinating the employment of subordinate units. The DART HQ develops, publishes, and distributes DART Contingency Plans, focusing on the 15 National Planning Scenarios and the National Guard "Essential 10" capabilities. These capabilities include C2 (Joint Force HQ for joint integration with air assets), Logistics (property, finance, and maintenance), Aviation, Military Police, Engineering, Transportation, Medical, Chemical (with access to one or more Civil Support Teams), Maintenance Capabilities, and Signal Assets. The DART HQ can also perform C2 and conduct Joint Reception Staging Onward Movement and Integration of inbound operationally controlled units at the request of the affected state.

2. Status of Equipment

a. Equipment On-hand

Beginning in FY 2006, the Army significantly increased its investment in ARNG equipment, allocating approximately $28B for new procurement and recapitalization between FY 2006 and FY 2009. As a result, ARNG EOH (MTOE only) increased from 69 percent to 77 percent at the end of FY 2009. ARNG CDU EOH, a subset of MTOE equipment, increased from 65 percent to 86 percent during this same period. The rapid improvement in ARNG EOH is impressive and essential to ensuring the ARNG is capable of fulfilling its missions. Though we anticipate the ARNG's EOH to improve at a much slower rate going forward, the ARNG's modernization will continue to increase at a significant rate based on the modern equipment it is programmed to receive.

i. Equip to Mission

The Army Equipping Strategy is to equip all units, including the ARNG, to their mission requirements for their overseas operations, which are not always the same as their MTOE requirements. "Equipping to Mission" ensures units are provided the necessary equipment to perform their overseas missions when they are assigned unrelated missions to their unit type. A MEEL is a unit's required equipment for a mission; often different than its MTOE. For example, ARNG units of various backgrounds have been assigned security force missions and been assigned MRAP vehicles and M9 Pistols for every Soldier, when their MTOEs call for very few M9s and no MRAPs. The M9 Pistol MTOE requirement for an Infantry Brigade Combat Team (BCT) is approximately 328 pistols, while the MEEL requirement ranges from 1,400 to 1,900 pistols according to their MTOEs. If forced to cross-level, this sort of expanded MEEL requirement reduces the quantity of equipment available to CONUS units for training and HD/DSCA missions. The Army is identifying overseas missions up to two years in advance of deployment in order for units to gain the necessary MEEL equipment needed for their overseas missions.

ii. Equipment to Support Training Requirements

The Army instituted a 12 month mobilization policy for the ARNG in FY 2007. Mobilized Soldiers will conduct pre-mobilization within their home state on drill weekends and during annual training as part of the "contiguous mobilization" concept before their 12 month orders begin. Under Contiguous mobilization these Soldiers will start their 12 month orders and move to their mobilization site after finishing the pre-mobilization training. Contiguous mobilization maximizes pre-deployment training, BOG time and strives to limit the number of times a Soldier leaves his civilian employer to once. It is critical that units have the majority of their training equipment 12 months prior to mobilization to conduct this individual and collective training prior to deployment. Pre-/post mobilization training resource needs still exist, but TPE and cross-leveling help reduce the impact of shortfalls in pre-mobilization and post-mobilization training equipment.

iii. Table of Distribution and Allowances (TDA) Equipment

ARNG TDA units, unlike MTOE units, contribute to domestic response missions. Such units include states' Joint Force Headquarters, which consist of The Adjutants General and their staffs who provide command and control support for HD/DSCA missions. Civil Support Teams (CSTs) are also TDA units, and there are currently 57 CSTs throughout the United States. CSTs are required to rapidly deploy to provide assistance to local first-responders in determining the nature of an attack and to provide medical and technical advice. Although TDA units generally do not deploy, they have equipment to train units, which contributes to the readiness and availability of ARNG units to support HD/DSCA missions. TDA units are usually lower priority and may inherently have older equipment and more shortages as they compete with deploying units.

iv. Equipment Cross-leveling

The cross-leveling of equipment presents a challenge to the ARNG and results in lower MTOE levels of equipment available. The ARNG has developed predictive models to lessen the effects of last minute requirements placed on units to move equipment to other states and territories in support of operational needs. Increased quantities of EOH over the past few years have

correspondingly reduced the necessity to cross-level equipment to more manageable levels. To support mobilization requirements, the ARNG directed the cross-leveling of over 26,900 items between states and territories in FY 2009 valued at $662.6M.

v. Stay Behind Equipment: DoDD 1225.6–Equipment Diversion to Support Theater

In prior years, selected ARNG units departing theater were required to leave their equipment as TPE for use by follow-on forces of all components and Services. The ARNG left approximately $3.7B of TPE in theater since OEF and OIF began. Currently, there are 116 Line Item Numbers (LINs) comprising 2,217 pieces of equipment with a value of $442M awaiting payback to the ARNG. The ARNG will continue to work in cooperation with HQDA G-8 to further reduce payback equipment and refine the 1225.6 reconciliation process.

vi. Equipping Impacts of Modularity

The ARNG has completed modularity. It has transitioned from a Division-centric force to a modular, Brigade-centric force with emphasis on the BCTs. The ARNG is currently comprised of 114 MTOE Brigades, to include 28 BCTs, 38 Functional Brigades, and 48 Multi-functional Brigades. BCTs are self contained, able to conduct full spectrum operations and the primary building block of the Army. They are more expeditionary and can fall under various command structures. The ARNG BCTs will be identical to the AC BCTs in manning, equipping requirements, and standards. These levels need to be maintained; they can be integrated with AC BCTs and other Brigades and maintain interoperability when deployed.

b. Average Age of Major Items of Equipment

The average age of ARNG equipment at the start of FY 2011 is reflected in *Table 2*. With an increase in manufacture and recapitalization programs through FY 2012, the historical issues associated with an aging equipment pool can be alleviated. If current levels of new procurement and recapitalization efforts continue, the average age of equipment is expected to be substantially reduced in the future.

c. Compatibility of Current Equipment with AC

Deployment of ARNG units continues to demonstrate that equipment compatibility is still an issue, despite the Army's efforts to equip all components to the same level of modernization. Compatibility problems can be caused by different generations of communications equipment, lack of repair parts to support older systems, differences in the fuels required, and other capacity or equipment interface problems. One major factor in the deployment of equipment is the evolving requirement for armor protection. Similar to other compatibility challenges, introduction of a new standard for armor protection can make a large amount of equipment less than fully acceptable for deployment. Current compatibility workarounds for deploying units are to keep critical equipment in TPE stocks or to issue the newest equipment versions only to units that are deploying. Compatibility has improved for tactical radios as the last AN/VRC-12 radios have been displaced by SINCGARS (single-channel ground and airborne radio systems). Also, it's important that ARNG equipment uses the same fuel as that available in theater. Some compatibility gaps remain for WIN-T equipment, SICPS, and the latest satellite communications

systems. *Table 7* provides a list of authorized substitutes currently employed within the ARNG that meet the Army's substitute guidance.

d. Maintenance Issues

i. Field Level Maintenance

Field level maintenance is critical to ARNG equipment readiness in the ARFORGEN model and for HD, DSCA, and emergency operation missions. It is essential the ARNG have modern maintenance shop facilities to effectively repair equipment for an operational force. The cost to modernize ARNG maintenance facilities is part of the $1.96B total funding needed for ARNG military construction. Many of ARNG shop facilities are 50 to 60 years old and do not have the required equipment to meet the modern demands of two level maintenance (formerly three) and requirements of maintaining a modern up-armored fleet.

ii. National Level Maintenance

The key to maintaining readiness of the ARNG fleet is the continued funding of the ARNG Depot Maintenance Program. An integral part of ARNG sustainment activities, the depot overhaul and rebuild programs sustain ARNG EOH and extend the service life of its fleet. Currently, the ARNG Depot Maintenance Program is funded at $281M, 68 percent of the ARNG total requirement in FY 2010 ($415M). The ARNG's Readiness Sustainment Maintenance Sites (RSMS) are also vital to supporting mobilized units by filling MTOE shortages that would otherwise have to be cross-leveled from other units. Four RSMS sites perform this maintenance. A fifth RSMS repairs chemical alarms and monitors, night vision devices, generators, and welders. The RSMS completed maintenance on over 7,381 pieces of equipment in the past year.

iii. Home Station Reset

Under the Home Station Reset program in FY 2010, the ARNG continued to restore equipment returning from Iraq and Afghanistan to Technical Manual 10/20 levels within 365 day of the unit's return to its home station. The burdens on AC installations as well as the costs associated with second-destination transportation have been reduced as a result of the Home Station Reset program.

The ARNG continues to recommend that unit equipment be shipped directly to a unit's home state to make ARNG equipment available earlier for Home Station Reset and for use in state

emergencies. Under current procedures, ARNG Soldiers must travel to one of several distant Equipment Demobilization Sites to transport and reload equipment returning from theater via ocean-going containers to commercial transportation, and then return back to their unit of record to down load that same equipment into their unit armories.

iv. Automatic Reset Induction (ARI)

All OCO units in theater are required to induct into Sustainment Maintenance 100 percent of equipment identified by HQDA as ARI prior to redeployment to CONUS. The depot has up to one year to return the equipment to the ARNG. Under the current process, visibility of the equipment is lost by the ARNG and OCO units upon induction into the supply system. HQDA is working to develop a Logistics Standard Army Management Information System that would allow all components to track the induction of ARI equipment from outside the CONUS (OCONUS) back to home station. Once completed, this will provide transparency and visibility of all equipment undergoing the sustainment reset process.

e. Other Equipment Specific Issues

i. Equipment Maintenance Technician Support

Congress and the Army have made great strides in equipping the ARNG to the levels needed to be successful in its role as an operational force. Unfortunately, full-time surface maintenance technician manning levels have not kept up with the increased levels of equipment and operating tempo. A manpower study of the surface maintenance facilities completed in FY 2010 validated a 29 percent increase in requirements for full-time surface maintenance technicians. Recent congressional funding has filled approximately 71.5 percent of the Guard's previously established surface maintenance technician requirements.

ii. Repair Parts Shortages

Several legacy systems that remain in CONUS have a scarcity of repair parts. The shortage of repair parts for these platforms create maintenance readiness challenges and result in a large percentage of the fleet being non-deployable and, in some cases, obsolete.

The majority of equipment being delivered or will be delivered is new and coming with new parts. All new systems are programs of record with established life-cycle management support.

B. Changes since Last NGRER

1. Transparency

Over the past year, the Army has continued to reinforce its commitment to achieving transparency and traceability of procurement-funded equipment from the President's Budget request to delivery at the unit level. Currently 82 systems are in the Transparency Program and in FY 2011 the Transparency tracking will become automated and all systems with greater than $5M in total funding will be tracked. Two IPTs spearhead the Army's effort: the Delivery Certification IPT and the FST IPT.

Recently, the Delivery Certification IPT, co-chaired by HQDA G-4 and G-8, successfully traced delivery of over 11,000 pieces of equipment from vendors and depots to individual units. Not only was each piece of equipment tracked through the distribution process, those items were also traced to their original funding sources.

The FST IPT has realized a number of significant accomplishments. For the first time, the FST IPT began a formal Post-Appropriation Reconciliation Process (PARP) for both the FY 2010 Base and OCO budgets. The PARP establishes a baseline from which deviations can be identified and assessed to determine, among other things, whether payback actions are warranted and to gauge the overall efficiency of post-appropriation funding execution.

Additionally, the FST IPT expanded those systems which are being tracked for procurement funds execution to include all those listed on the current P-1R (Procurement Programs, Reserve Components) submission. As mandated by OSD, this effort to expand to all P-1R systems is ahead of the established 1st Quarter, FY 2011 benchmark. The FST IPT identified numerous instances where Army Secretariat funding requests could not be traced to DoD funding requests, requiring the formation of a number of special initiatives to identify disconnects between the two submissions. These initiatives will ultimately provide seamless traceability of procurement funding from the programmatic to the component levels at all stages of the appropriations process.

Transparency efforts are already paying dividends to the ARNG. Utilizing Transparency-specific business rules and examining recent equipment deliveries, the Army has identified numerous instances where under-delivery of equipment or diversion of funds during FYs 2009 and 2010 resulted in paybacks to the ARNG. Continued refinement and institutionalization of the processes, business rules, and data systems established by the FST and DC IPTs will keep transparency of financial and equipment tracking processes on schedule for full implementation by FY 2013.

2. Army Equipping Strategy

The ARNG has experienced unprecedented funding growth and transformed into a modular force. Its equipment has undergone unprecedented modernization. The ARNG's equipping strategy emulates the Army's G-8 Equipping Strategy, using its eight lines of intent: Equip to meet ARFORGEN Aim Point requirements; Recognizes reduced requirements for Reset and in-theater transit; Transition to Army Materiel Command as the Lead Materiel Integrator; MTOE and assigned mission equipping; reduce equipment redistribution; emphasis on property accountability, maintenance and reporting; and units will train on equipment that they will use in theater. The new strategy recognizes that, at any given time, approximately 12-17 percent of the Army's equipment is consumed by "friction" (e.g., in-theater or cross-leveled) and, therefore,

sets goals to equip units to their position in the ARFORGEN cycle. An important Army Equipping Strategy goal is to equip the ARNG to 80 percent or better for its CDU items.

3. Equipping Successes

From August 2009 through July 2010, the ARNG received 96,904 pieces of new equipment valued at approximately $8.76B. This total reflects the ARNG receiving higher cost high density items than previous years—an effect of a typical two year lag between contracting and delivery of new high dollar equipment. Three notable success stories are FMTV, HMMWV ambulances, and TOCS/SICPS.

Using NGREA funds from FY 2008 and FY 2009, the ARNG has contracted for 1,173 FMTV. This is the first time since 2006 that the ARNG has been able to place NGREA funds on a FMTV contract.

In 2007, the ARNG identified that it would have difficulty responding to HD/DSCA missions due to its aging HMMWV ambulance fleet. The Joint Light Tactical Vehicle, will be too large and bulky to accommodate HD/DSCA missions, the ARNG realized a capability shortfall. Over the last three years, the ARNG has worked with the Tank and Automotive Command and industry to produce new HMMWV ambulances for the ARNG. NGREA dollars will produce 500 M997A3 HMMWV ambulances that will be used for HD/DSCA missions.

FY 2008 and FY 2009 NGREA dollars have been placed on contract to purchase the SICPS, and CPP hardware and software for 47+ selected brigade or battalion level units. This capability provides standardized communication infrastructure for commanders and staff to digitally plan, prepare, and execute operations on the battlefield.

C. Future Years Program (FY 2012–FY 2014)

The ARNG received $4.75B in FY 2010 procurement funding including the supplemental appropriation and NGREA funding. Detailed information is provided below. FYDP funding is expected to decrease. The ARNG expects to receive $3.45B in FY 2011 in total procurement funding. Base funding in future years is programmed for $2.56B in FY 2012, $1.87B in FY 2013, and $2.24B in FY 2014, these figures do not include supplemental appropriations or NGREA funding. This funding will likely increase as fielding plans for out-years begin to reflect component splits.

1. New Equipment Procurements

The ARNG continues to receive and field thousands of pieces of equipment each year as the Army works to equip and modernize it as an operational force. For example, from August 2009 through July 2010, the ARNG received 96,904 pieces of equipment valued at approximately $8.76B. In FY 2010, the Army allocated approximately $3.33B in base funding for ARNG equipment. Highlights include $221M for HEMTTs (heavy expanded mobility tactical trucks), $186M for UH-72A light utility helicopters, $182M for Blackhawk helicopters, $164M for HMMWVs, and $150M for FMTV. Highlights of Soldier systems and communications equipment include $103M for thermal weapon sights, $83M for night vision goggles, and $26M for TOC/SICPS. Taking into account current funding levels, production capacities, and the age of ARNG equipment, the ARNG tactical wheeled vehicle and helicopter fleets will continue to

require $500M and $1.3B respectively in additional funding over the next 10 years for shortfalls and modernization.

2. Funding for New and Displaced Equipment Training

New Equipment Training (NET)/Displaced Equipment Training (DET) funding correlates to the amount of new equipment scheduled to be received. In FY 2010, the ARNG received $70.5M in NET funding (versus $46.2M in FY 2009) to field new equipment.

There are additional costs related to NET that are not specifically included in the NET event. For example, often a state requires Refuel and Hazardous Material Specialists' or when a NET requires live firing, states are mandated to statutorily provide Range Safety Officers, range control managers, ammunition handlers, and medics all of which are not funded by the NET program. When large equipment (tanks, Bradley Fighting Vehicles), goes through NET, this equipment comes with a large amount of additional equipment requiring installation. This is normally referred to as Deprocessing. An accounting line of Operation and Maintenance, National Guard appropriation in support of NET for approximately $8M would provide the necessary Support and Deprocessing funding for states to execute new equipment fielding and training.

3. Anticipated Transfers from AC to RC

The ARNG is projected to receive cascaded equipment as outlined in *Table 5 (Projected Equipment Transfer/Withdrawal Quantities)*. The Army, however, must develop a strategy to ensure the long-term interoperability and sustainability of the entire force. The AC has also received a large influx of newly procured equipment, especially units rotating overseas. This new AC equipment allowed the AC to cascade some older equipment to the ARNG. The cascades will be instrumental in filling current shortages and replacing obsolete equipment while the Army continues to develop projections for cascades to the ARNG through FY 2015.

4. Anticipated Withdrawals from ARNG Inventory

New, rebuilt, reset, or cascaded equipment will allow the withdrawal of obsolete equipment. Table 2-1 shows the obsolete items (left hand column) with what systems they will be replaced by (right hand column).

Old System	Replaced-by System
CH-47D Cargo Helicopter	CH-47F Cargo Helicopter
M35-series 2 1/2-ton Trucks	Family of Medium Tactical Vehicles (FMTV)
M800-series 5-ton Trucks	FMTV
M915A1 Tractor	M915A3/A4 Tractor
M920 Tractor	M916 Tractor
M109A5 and M198 Howitzers	M109A6 and M777 Towed Howitzers
M16A1 Rifle	M16A2/A4 Rifle and M4/M4A1 Carbines
M1 and M1A1 Tanks	M1A1 Abrams Integrated Management (AIM) Tanks
M2 Bradley Fighting Vehicle (BFV)	M2A2 Operation Desert Storm (ODS)
M3 BFV	M3A2 ODS
M113 APC Variants	M113A3, M577A3, M1064A3, M548A3 and M1068A3
AH-64A Attack Helicopters	AH-64D Attack Helicopters
OH-58A/C Scout Helicopters	UH-72A Light Utility Helicopters (LUH)
UH-1H/V Utility/MEDEVAC Helicopters	UH/HH-60A or L Utility/MEDEVAC Helicopters
UH/HH-60A Utility/MEDEVAC Helicopters	UH/HH-60L or M Utility/MEDEVAC Helicopters

Table 2-1. Old versus Replaced-by Systems

5. Equipment Shortages and Modernization Shortfalls

While ARNG procurement funding is expected to decrease in future years, the Army and Congress continue to demonstrate their commitment to equipping the ARNG with modern equipment. *Table 8 Significant Major Item Shortages* provides further detail on the ARNG's prioritized top ten shortages for major items of equipment that would benefit from additional funding in the FYDP.

a. Budget Operating Systems (BOS)

BOS's comprise Management Decision Packages of the following two categories: (a) weapon systems, or components thereof, for the battlefield and (b) support systems that enable weapons, personnel or information to reach or leave the battlefield. Such systems fulfill the Army's combat, combat support (CS), and CSS missions. Systems indentified in the following BOS tables with fill percentages below 90 percent are candidates for NGREA funding.

i. Air Defense Budget Operating System

The Air Defense BOS consists of systems that detect, track, and destroy enemy air and missile attacks.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Avenger Slew to Cue (STC)	86	60	70%	$7.6M
Air/Missile Defense Planning and Control System (AMDPCS)	3	2	66%	$4M

Table 2-2. Air Defense Budget Operating System

Key systems for this category are listed above and still have significant shortfalls. The current Stinger missile shelf life ends in FY 2015. Two of the three AMDPCS brigades are fully funded, one is not. Another shortfall is the upgrade of existing Sentinel radars to the Enhanced Tactical Radar Correlator System, also called the Improved Sentinel, is at 50 percent; the requirement has grown from 50 to 70 systems. The ARNG has current requirements for 7 Air Defense Artillery Battalions. Several of these battalions rotate responsibility for the defense of the National Capital Region.

ii. Aviation Budget Operating System

The Aviation BOS consists of both manned and unmanned aerial systems; it includes both fixed and rotary wing assets, along with the aviation ground support equipment (AGSE) required to service and maintain these systems.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
UH-60 Blackhawk Modernization	849	247	29%	$256M
LUH-72 Lakota	220	106	61%	$214M
AH-64 Apache	192	144	75%	$332M
CH-47D Chinook Modernization	161	15	9%	$515M

Table 2-3. Aviation Budget Operating System

The above systems are considered CDU (except the AH-64 Apache) and have a significant role in ARNG-supported OCO and HD/DSCA missions. The FY 2012 on-hand quantities of fixed and rotary wing airframes include a mixed fleet of new production aircraft, older cascaded aircraft, and retiring legacy aircraft. The ARNG has a significant lack of aviation modernization funding with some rotary platforms and AGSE. At the current UH-60 conversion rate, it will take until mid-2023 to fully divest the UH-60A fleet. The ARNG MEDEVAC capability has increased substantially. The unmanned aerial platforms will be fully funded (100 percent) by FY 2012. The Aviation BOS utilizes a mix of programmed funds, and NGREA funds have been used for utility and MEDEVAC equipment.

iii. Battle Command Budget Operating System

The Battle Command BOS consists of the Army digital C2, communication, computer, and intelligence systems including fixed/semi-fixed and mobile networks that are designed for interoperability.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Standardized Integrated Command Post System (SICPS)	1,676	1,489	89%	$68M
Tactical Battle Command (TBC)	2,703	2,610	97%	$3.8M
Force XXI Battle Command Brigade and Below (FBCB2)	28,308	12,493	44%	$493M

Table 2-4. Battle Command Budget Operating System

The SICPS is a crucial piece of equipment for the ARNG and is used for tying in the interoperability of all Army Battle Command Systems (ABCS) throughout various echelons. Over the past year, the ARNG has made great strides, rising to 89 percent fill, by injecting NGREA funds for this system. NGREA funds have supplied a vital bridge to ARNG units to achieve an acceptable mission-capable readiness level. The TBC, with the help of NGREA dollars, is fully funded (100 percent) through FY 2011. The ARNG expects to field 90 percent of FBCB2/Blue Force Tracker requirements by December 2011.

iv. CSS Quartermaster, Ordnance, and Medical Budget Operating System

The CSS Quartermaster, Ordnance, and Medical BOS consists of medical, fuel, water, and food systems.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
2000 Gallon Tank (HIPPO)	593	153	26%	$74M
900 Gallon Water Storage Pod (Camel)	87	0	0%	$14.5M
Field Feeding Systems	1,091	967	89%	$19.9M
Containerized Kitchens	362	307	85%	

Table 2-5. CSS Quartermaster, Ordnance, and Medical Budget Operating System

Since both the HIPPO and Camel water systems are new items of equipment that are being initially fielded to the Army, the ARNG is experiencing low percentage fill rates. Additionally, the Camel system is experiencing initial production delays; consequently, the on-hand quantity remains zero. In FY 2010, the ARNG was able to raise the percentage on-hand of Containerized Kitchens from 33 percent last year to 85 percent. Although the Army made a decision to reduce funding of this system, the ARNG was able to utilize NGREA dollars to increase the on-hand quantity. The Containerized Kitchens play a vital role in the ARNG's HD/DSCA missions; thus, the ARNG felt it was important to invest funding into this system.

v. CSS Transportation Budget Operating System

The CSS Transportation BOS consists of Light Tactical Vehicles (LTVs), Medium Tactical Vehicles (MTVs), Heavy Tactical Vehicles (HTVs), and Tactical Trailers.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Light Tactical Vehicles (LTVs)	48,575	48,575	100%	$0
HMMWV Ambulances	1,664	1,256	75%	$162M
Medium Tactical Vehicles (MTVs)	30,528	26,517	87%	$1.7B

Table 2-6. CSS Transportation Budget Operating System

Although the LTV percentage fill shows 100 percent, only 28 percent of the fleet is armor capable, and only 35 percent of the fleet will be armor capable by FY 2012. The remaining LTV fleet consists of legacy, non-armored vehicles that are not capable of performing full-spectrum

operations, but will satisfy the Hardware Division mission. This is a significant modernization and interoperability issue for the ARNG.

With regard to the HMMWV fleet, the Army and ARNG strategy is to modernize the fleet by maximizing recapitalization funding and technologies. The Army's HMMWV Recapitalization Plan, if approved, will allow the ARNG to extend the economic useful life of over 13,000 legacy HMMWVs that require recapitalization costs of $715M. To mitigate the HMMWV ambulance shortfall, the ARNG is investing in 500 modern M997A3 HMMWV ambulances mounted on the M1152 chassis. The ambulances are projected to be delivered in the 3rd Quarter FY 2012. Upon completion, the ARNG will increase the HMMWV ambulance EOH to 100 percent by FY 2013.

MTVs are the backbone of the ARNG's truck fleet and critical to performing domestic and OCO missions. The ARNG's MTV fleet lags behind the AC in both on-hand numbers and fleet modernization. Currently, the ARNG's MTV fleet consists of a mix of modern and older legacy vehicles. The legacy M939-series vehicles range in age from 20–30 years old and are difficult to sustain due to the lack of parts availability. Only 37 percent (12,100) of the MTV fleet is modernized with FMTV variants; only 3 percent (927) are armor-capable FMTV. The estimated cost to pure-fleet FMTV without substitutes is approximately $3.8B; the $1.7B shortfall in Table 2-6 for MVTs includes substitutes.

vi. Fire Support Budget Operating System

The Fire Support BOS consists of all fire support and related systems.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
M1200 Armored Knights	170	60	35%	$189M
Lightweight Laser Designator Range Finder (LLDR)	1,057	318	30%	$218M
Q-37 Radar	16	9	48%	$60M

Table 2-7. Fire Support Budget Operating System

The above key systems have a significant role in ARNG OCO missions. The ARNG is fully funded for its howitzers and High Mobility Artillery Rocket Systems (HIMARS). The EQ-36 Radar is at the Milestone-C decision point and is scheduled to begin full rate production in FY 2013; it will replace the Q-36 and Q-37 radars.

vii. Intelligence and Electronic Warfare (IEW) Budget Operating System

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Prophet Electronic Support Spiral	69	11	45%	$127M
Distributed Common Ground System-Army (DCGS-A) All Source Analysis System-Light (ASAS-L)	1,290	1,217	94%	$2.2M
Common Ground Station (CGS)	22	11	50%	$51M

Table 2-8. IEW Budget Operating System

The IEW BOS consists of a variety of military IEW systems and subsystems. Noteworthy systems within the IEW BOS consist of the Trojan Special Purpose Intelligence Remote Integrated Terminal (SPIRIT), Prophet, Counterintelligence/Human Intelligence Automated Reporting and Collection System, and Distributed Common Ground System-Army All Source Analysis System-Light. The Trojan SPIRIT is fully funded and fielded. Prophet is also fully funded. The rapid developments and advancements in the support software make this BOS both very volatile and expensive to maintain.

viii. Maneuver Budget Operating System

The Maneuver BOS consists of a variety of combat systems that are considered force-multipliers.

SYSTEM	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Bradley Fighting Vehicles	998	825	83%	$362.1M
Stryker Vehicles	430	305	71%	$731M
Improved TOW Acquisition System (ITAS)	664	561	84%	$74.6M
Javelin System	2,584	2,443	94.5%	$22.1M
Long Range Advanced Scout Surveillance System (LRAS3)	863	834	96.6%	$14.9M

Table 2-9. Maneuver Budget Operating System

The above key systems have a significant role in ARNG OCO missions. The ARNG's M1 Abrams and Stryker requirements are fully funded by FY 2016.

ix. Mobility Budget Operating System

The Mobility BOS consist of engineer systems designed for use in a variety of missions including: mobility, counter-mobility, survivability, sustainment, and general engineering.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Road Grader	185	91	49%	$29.3M
High Mobility Engineer Excavator	64	35	55%	$7.3M
Hydraulic Excavator (HYEX)	133	78	59%	$19.5M
Scrapers	410	364	89%	$32.9M
Medium Mine Protected Vehicle (MMPV)	186	13	7%	$93.4M
Mine Protected Clearance Vehicle (MPCV)	36	13	36%	$33.8M
Vehicle Mounted Mine Detector System (VMMD)	72	11	15%	$138.2M
Armored Breacher Vehicle	42	6	14%	$169.2M

Table 2-10. Mobility Budget Operating System

The key systems above have significant roles in ARNG OCO and HD missions. The ARNG is fully funded by FY 2016 for most major engineering systems, especially construction ones. The Armored Breacher Vehicle, Heavy Scrapper, and Medium Mine Protected Vehicle are exceptions. The Countermine Vehicle System shortfall values are due to operational requirements for countermine vehicles in support of OCO. The HYEX and Heavy Scrapper are not under contract yet.

x. Nuclear, Biological, and Chemical (NBC) Force Protection Budget Operating System

The NBC Force Protection BOS consist of systems to support chemical, biological, radiological, and nuclear (CBRN) activities.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
Joint Chemical Agent Detector (JCAD)	761	2,292	300%	$0
Chemical and Biological Protection Shelter (CBPS)	291	0	0%	$225M

Table 2-11. NBC Force Protection Budget Operating System

The Joint Chemical Agent Detector (JCAD) projects have an excess of systems due to a HQDA-directed push of systems. BOIP documentation is in the process of being applied to the above systems, so the actual resultant equipment shortfall value is expected to change. The Chemical and Biological Protection Shelter (CBPS) remains a critical shortfall for the ARNG, at a value of $225M. The CBPS FY 2012 requirement is 291 systems; the ARNG will have one system (1 percent) by then. The CBPS system has not been authorized to proceed with a full rate of production decision; consequently, it will be FY 2013 before this system will be fielded to the ARNG.

xi. Soldier Systems Budget Operating System

The Soldier Systems BOS includes small arms, night vision goggles, and thermal weapons sights, along with associated accessories.

System	Required Qty (FY12)	On-hand Qty (FY12)	Percent Fill	Equipment Shortfall
PVS-14 Night Vision Sight	233,575	227,702	97%	$858K
PAS-13 Thermal Sight	67,799	60,058	89%	$87.7M

Table 2-12. Soldier Systems Budget Operating System

These systems have a significant role in both ARNG OCO and HD/DSCA missions. The ARNG has almost 90 percent of its EOH for night vision systems, which is a significant improvement. Small arms are fully funded in all systems; however BOIP documentation is being applied which could potentially result in a shortfall to be determined. The current lack of production capacity for these small arms systems affects the entire Army. It will be compounded when the requirements for crew served weapons increase. NGREA has been used to purchase M25 Binoculars, small arms tool sets, night vision goggles, and pistols.

D. Summary

The ARNG is transitioning from its role as a strategic reserve to an operational force, as well as to continuing to meet its HD/DSCA missions. With this new mission and role as an operational force, it is critical for the ARNG to continue modernization. For the coming year, the ARNG will continue to focus on better posturing itself towards the Army's ARFORGEN-based Equipping Strategy by increasing its interoperability and modernization of equipment. The Army continues to demonstrate a strong commitment to modernize the ARNG. The ARNG has received or is now on track to receive its full complement of key systems to include HTVs, small arms, communication systems, field artillery systems, and combat arms systems; however, tactical wheeled vehicles and aviation systems still lag behind and require $500M and $1.3B respectively in additional funding over the next 10 years. While transparency efforts have steadily improved, additional work is still required to track funds from Congressional appropriation to equipment delivery to the unit for all major systems.

Table 1

ARNG
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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Aircraft							
Helicopter, Observation, OH-58C	H31110	$190,817	9	9	9	9	48
Helicopter, Attack AH-64A	H28647	$10,680,000	66	66	66	66	20
Helicopter, Utility, UH-1H	K31795	$922,704	8	8	8	8	5
Helicopter, Medevac, HH-60Q	U84541	$7,908,000	4	4	4	4	0
Helicopter, Cargo CH-47D	H30517	$5,000,000	133	133	133	133	150
Helicopter, Utility, UH-60A	K32293	$4,635,000	488	488	488	488	27
Helicopter, Utility, UH-60L	H32361	$4,855,000	175	205	256	292	689
Helicopter, Medevac, HH-60L	U84291	$7,908,000	9	9	9	9	0
Helicopter, Observation, OH-58A	K31042	$92,290	138	138	138	138	16
Ground Control Station, (TUAV Shadow)	Z49008		38	38	38	38	56
Airplane, Cargo Transport, C-23B	A29880	$7,424,158	33	33	33	33	58
Tactical UAV System, Shadow	T09343	$2,000,500	25	25	25	25	28
Helicopter, Light Utility, UH-72A	H31329	$3,900,000	94	138	138	164	102
Helicopter, Utility, UH-1V	H31872	$948,158	0	0	0	0	15
Helicopter, Cargo CH-47F	C15172	$30,000,000	6	9	10	18	12
Helicopter, Utility, UH-60M	H32429	$8,000,000	36	36	41	60	60
Helicopter, Attack AH-64D	H48918	$25,128,800	124	124	124	124	192
Helicopter, Observation, OH-58D	A21633	$4,075,800	24	24	24	24	30
Airplane, Cargo Transport, C-12U	BA108Q	$2,150,000	9	9	9	9	0
Airplane, Cargo Transport, C-12F	A30062	$3,068,422	24	24	24	24	45
Airplane, Cargo Transport, C-12D	A29812	$1,967,301	9	9	9	9	1
Airplane, Cargo Transport, C-26	A46758	$800,000	11	11	11	11	11
Aviation							
Radio Set, HF, AN/VRC-100(V)1	R81691	$33,707	173	173	173	173	238
Hoist, High Performance	H39331	$142,338	221	221	221	221	461
NAVSTAR GPS Aviation Set, AN/ASN-128 Doppler	Z46320		0	0	0	0	692
Tool Kit Tube Swaging, Set B	T57982	$29,168	135	135	135	135	237
Shop Equipment Contact Maint (SECM)	S30224	$250,000	2	2	2	2	335
Tool Set, Aviation Foot Locker Spt PM Acft	T65997	$5,000	558	558	558	558	790
Radar Set, AN/TPN-31	R17126	$3,701,502	13	13	13	13	14
Radio Set, HF, AN/ARC-220 (V)1	R22436	$27,779	893	893	893	893	846
Power Unit Auxiliary, Aviation (AGPU)	P44627	$286,060	154	154	154	154	279
Aviation Night-vision System (ANVIS), AN/AVS-6	A06352	$10,747	5,334	5,334	5,334	5,334	5,228
Command System, Tactical, AN/TSQ-221	C61597	$3,000,000	21	21	21	21	38
UH-60A External Stores Subs	E21985	$676,111	94	94	94	94	798

Table 1

ARNG
Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Air Defense							
Air Defense Sys Integrator, AN/MSQ-214(V)1	Z03104		0	0	0	0	14
Radar Set, Sentinel AN/MPQ-64	G92997	$3,500,000	34	36	38	52	72
Fire Unit Vehicle Mtd, Avenger	F57713	$1,090,277	264	264	264	264	264
Battle Command and Control							
Computer Set, OL-591/TYQ	C18718	$8,226	36	45	48	48	23
Computer Set, OL-590/TYQ (SAMS 1 Config)	C28078	$19,571	175	219	230	230	50
Computer System, AN/TYQ-109(V)1	C27707	$5,000	4,853	4,853	4,853	4,853	4,232
Shelter, Rigid Wall, Command Post	R98145	$162,800	67	67	67	67	584
Computer Set, AN/UYK-128	C18378	$15,850	8,390	12,016	12,467	12,467	37,656
Computer System, AN/UYQ-90(V)3	C78851	$8,500	1,193	1,254	1,298	1,331	3,435
Power Plant, 10kW, AN/MJQ-37 TQG	P42262	$50,294	176	176	176	176	285
Computer System, AN/UYQ-90(V)2	C18278	$5,650	8,712	9,842	10,869	11,155	18,553
Computer System, AN/TYQ-109(V)2	C27775	$7,000	807	807	807	807	830
Accessory Kit, Electronics Equip, MK-2975	Z00057		19	19	19	19	104
Processor Group Signal Data, OL-701/TYQ	Z53098		148	148	148	148	397
Processor Group Signal Data, OL-700/TYQ	Z00056		151	151	151	151	412
Interface Unit Communications Equipment, OL-713(V)1/TYQ CSS VSAT	Z00560		1,141	1,312	1,380	1,403	1,102
Computer Set, OL-604/TYQ	C18684	$14,899	420	930	1,389	1,500	536
Computer Set, OL-582/TYQ	C18446	$5,000	217	217	217	217	86
Navigation Set, Satellite Signals AN/PSN-13	N96248	$4,535	53,444	60,135	61,246	64,208	74,124
Computer Set, OL-603/TYQ	C78827	$14,899	120	123	126	127	264
Interrogator Set, AN/TYX-1	J99233	$14,000	819	819	819	819	682
Computer System, AN/TYQ-129(V)2	C27435	$3,000	3,908	3,918	3,918	3,918	3,040
Computer System, AN/TYQ-129(V)1	C27367	$13,000	162	230	230	230	95
Generator Set, 60kW, MEP-805A/B TQG	G74575	$26,705	105	207	207	207	369
Power Plant, 30kW, AN/MJQ-40 TQG	P42126	$85,594	67	67	67	67	143
Generator Set, 5kW, MEP-802A TQG	G11966	$12,798	1,640	1,942	2,475	2,581	808
Generator Set, 3kW, MEP-831A TQG	G18358	$9,922	5,166	5,166	5,166	5,166	7,881
Generator Set, 2kW, MEP-501A	G36237	$6,000	2,391	2,391	2,391	2,391	3,994
Generator Set, 10kW, MEP-003A	J35825	$13,635	736	736	736	736	48
Generator Set, 10kW, MEP-803A TQG	G74711	$14,345	975	1,331	1,331	1,331	1,906
Generator Set, 5kW, MEP-002A	J35813	$8,332	1,859	1,859	1,859	1,859	116
Generator Set, 15kW, PU-802 TQG	G53778	$31,481	697	697	697	697	1,469
Generator Set, 30kW, PU-803/B/G	G35851	$38,418	290	290	290	630	265
Generator Set, 2kW, MEP-531A	G36169	$6,000	63	63	63	63	62
Generator Set, 5kW, PU-797 TQG	G42238	$23,738	685	685	685	685	830
Generator Set, 10kW, PU-798 TQG	G42170	$25,757	1,288	1,288	1,288	1,288	1,528
Generator Set, 10kW, PU-753/M	G40744	$12,102	325	325	325	325	7
Generator Set, 60kW, PU-805 TQG	G78306	$44,185	135	135	135	135	231
Power Plant, 10kW, AN/MJQ-18	P28015	$36,050	69	69	69	69	4
Computer System, AN/TYQ-105(V)1	C27503	$2,562	7,305	7,670	7,700	8,078	10,252
Generator Set, 15kW, PU-801/A TQG	G78374	$32,622	93	93	93	93	217

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Battlespace Awareness							
Target Acq Subsystem, AN/TSQ-179(V)2	T37036	$5,000,000	11	11	11	11	38
Trojan Spirit Lite, AN/TSQ-226(V)2	C43331	$1,275,000	4	4	4	4	2
Trojan Spirit Lite, AN/TSQ-226(V)3	C43399	$1,880,000	45	47	48	48	45
Digital Topographic System, AN/TYQ-67(V)	D10281	$2,500,000	62	87	87	87	94
Battle Command Transport Networks							
Radio Set, SINCGARS AN/VRC-88A	R67194	$12,519	1,369	1,369	1,369	1,369	2
Radio Set, SINCGARS AN/VRC-119A	R83005	$10,117	1,898	1,898	1,898	1,898	0
Radio Set, SINCGARS AN/VRC-89D	R44931	$12,000	497	497	497	497	0
Radio Set, SINCGARS AN/VRC-92F(C)	R45543	$13,446	11,820	11,831	11,831	11,831	14,836
Receiver Transmitter, RT-1539(P)A(C)/G	R30434	$92,763	104	104	104	104	0
Receiver Transmitter, SINCGARS RT-1523(C)/U	R31609	$9,310	22,525	22,525	22,525	22,525	108
Receiver Transmitter, SINCGARS RT-1523C(C)U	R70839	$9,310	12,669	12,669	12,669	12,669	2
Radio Set, SINCGARS AN/VRC-91A	R68010	$23,249	3,959	3,959	3,959	3,959	0
Radio Set, SINCGARS AN/VRC-92A	R45407	$21,238	1,783	1,783	1,783	1,783	15
Radio Set, SINCGARS AN/VRC-90A	R67908	$13,178	9,967	9,967	9,967	9,967	49
Radio Set, SINCGARS AN/VRC 91F(C)	R68146	$11,817	6,379	6,883	6,883	6,883	12,271
Radio Set, SINCGARS AN/VRC-88D	R67262	$15,145	267	267	267	267	0
Radio Set, SINCGARS AN/VRC-88F(C)	R67330	$7,123	1,528	1,554	1,554	1,554	1,824
Radio Set, SINCGARS AN/VRC-91D	R68078	$14,000	955	955	955	955	0
Radio Set, SINCGARS AN/PRC-119D	R83073	$14,000	483	483	483	483	0
Radio Set, SINCGARS AN/PRC-119F(C)	R83141	$4,346	6,989	7,189	7,189	7,189	9,251
Radio Set, SINCGARS AN/VRC-90D	R67976	$12,000	3,006	3,006	3,006	3,006	0
Radio Set, SINCGARS AN/VRC-87A	R67160	$12,109	359	359	359	359	0
Radio Set, SINCGARS AN/VRC-89F(C)	R44999	$11,128	2,882	2,952	2,952	2,952	5,279
Radio Set, SINCGARS AN/VRC-89A	R44863	$22,822	1,590	1,590	1,590	1,590	1
Radio Set, SINCGARS AN/VRC-90F(C)	R68044	$7,415	25,477	25,574	25,574	25,574	59,856
Radio Set, SINCGARS AN/VRC-87D	R67228	$14,825	163	163	163	163	0
Radio Set, SINCGARS AN/VRC-87F(C)	R67296	$6,532	960	960	960	960	630
Radio Set, SINCGARS AN/VRC-92D	R45475	$16,000	867	867	867	867	0
Receiver Transmitter, SINCGARS RT-1523E(C)/U	R30343	$9,310	25,393	25,393	25,393	25,393	28
Radio Set, AN/PRC-126	R55336	$1,997	3,827	3,827	3,827	3,827	6,484
Radio System, EPLRS	P49587	$50,011	740	740	740	740	9,131
Radio Terminal, Telephone, AN/VRC-97	T55957	$110,000	193	193	193	193	0
Radio Set, AN/PSC-5	R57606	$27,000	383	533	533	533	4,312
Satellite Comm Terminal, AN/TSC-154	T81733	$825,000	52	58	64	64	128
Computer System, AN/PYQ-10(C)	Z00384		28,229	30,475	30,513	30,513	88,856
Satellite Comm Terminal, AN/TSC-93A	S34963	$825,000	27	27	27	27	0
Satellite Comm Terminal, AN/TSC-85A	S78466	$1,600,000	14	14	14	14	0
Radio Set, AN/PSC-11	R57810	$150,000	35	35	35	35	2
Sm Exten Node Switch, AN/TTC-48C(V)1	S25004	$700,000	27	27	27	27	0
BN Cmd Post (Switching Group), OM XXX	Z00564		285	304	304	304	362
JNN Central Office Telephone, AN/TTC-59	Z00562		85	95	95	95	128

Table 1

ARNG
Consolidated Major Item Inventory and Requirements

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Spectrum Analyzer, AN/USM-489(V)1	S01416	$37,378	42	42	42	42	84
Test Set, Radio, AN/GRM-114	T87468	$11,822	389	389	389	389	411
Radio Set, AN/PRC-104A	R55200	$12,000	134	134	134	134	616
Radio Set, HF, AN/GRC-193A	H35404	$37,000	83	83	83	83	8
Radio Access Unit, AN/TRC-191	R33351	$1,184,275	8	8	8	8	0
Radio Terminal, AN/TRC-190(V)3	L69442	$500,805	82	82	82	82	0
Radio Terminal, AN/TRC-190(V)1	L69306	$276,750	121	121	121	121	0
Control Receiver Transmitter, C-11561(C)/U	C05541	$6,055	147	147	147	147	72
Combat Mobility							
Bridge Erection Set, Fixed Bridge, 97CLE53	C22126	$488,354	4	4	4	4	25
Bridge Erection Set, Fixed Bridge, 97CLE52	C22811	$964,515	8	8	8	8	18
HEMTT Common Bridge Transporter, M1977	T91308	$226,150	620	676	676	676	688
Bridge Heavy Dry, Supt (Hdsb) 40m MLC96	B26007	$2,676,000	20	20	27	34	32
Boat Bridge Erection, MK1/MK2	B25476	$210,000	124	124	124	124	172
Loader Scoop Type, DED w/MultiPurpose Bucket	L76556	$92,895	364	364	364	364	424
Reinforcement Set, Medium Girder Bridge	C27309	$498,940	4	4	4	4	25
Launcher, M60 Tank Chassis, AVLB	L43664	$527,126	123	123	123	123	113
Tractor, Whld Excavator, SEE	T34437	$110,000	603	603	603	603	276
Tractor, Full-tracked, Armored, M9 (ACE)	W76473	$887,050	79	79	79	79	119
Pallet, Bridge Adapter (BAP) M15	P78313	$37,085	452	452	452	452	522
Boat Cradle, Improved (IBC), M14	C33925	$22,064	112	112	112	112	178
Interior Bay Bridge, Floating	K97376	$111,968	379	403	433	433	366
Launcher, Hvy Dry Support Bridge	L67660	$937,000	16	16	16	16	24
Ramp Bay Bridge Floating	R10527	$134,112	104	104	104	104	152
Bridge Erection Set, Fixed Bridge, 97CLEO40	C22058	$43,944	7	7	7	7	107
Field Logistics							
Test Set, Elect Sys AN/PSM-95	T92889	$18,233	9,100	11,593	11,887	12,837	13,368
Shop Equip, Contact Maint Ord/Eng Trk-mtd	S25681	$75,000	1,551	2,410	2,569	2,618	1,939
Forward Area Refueling System, Aafars	F42611	$321,537	128	128	128	128	117
Signal Generator, SG-1219/U	S48255	$39,335	75	75	75	75	192
Truck, Forklift, ATLAS	T73347	$166,639	528	593	630	630	715
Forward Repair System (FRS)	F64544	$275,000	575	699	699	699	660
Kitchen, Containerized, CK	C27633	$100,532	114	134	134	134	394
Rough Terrain Container Handler, RT240	R16611	$460,077	84	98	99	99	48
Tent, Ltwt Maintenance Enclosure (LME)	T49947	$16,509	1,550	1,550	1,550	1,550	1,455
Water Quality Analysis Set, Purification	W47475	$3,404	88	88	88	88	0
Water Storage/Distribution Set, 40k GPD	W55968	$121,746	6	6	6	6	64
Food Sanitation Center	S33399	$33,865	850	850	850	850	899
Tank & Pump Unit, Liquid Dispensing Trk-mtd	V12141	$9,015	874	874	874	874	779
Test Set Line, Adv Flight Control Sys CH-47D	T81985	$154,441	45	45	45	45	49
Forward Area Water Point Supply System	F42612	$19,484	148	244	244	244	23
Test Set, Transponder, AN/APM-305	V99436	$35,182	35	35	35	35	91
Shelter, Tactical Expandable Twoside	S01359	$223,219	6	6	6	6	98

Table 1

ARNG
Consolidated Major Item Inventory and Requirements

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Tank, Liquid Storage	T32629	$131,839	268	363	399	407	1,247
Riot Control Agent Disperser, Svc Kit, M254	S78839	$1,645	193	193	193	193	2,467
Truck, Forklift, DED 50k lb, RT, Cont Hdlr	T48941	$159,138	7	7	7	7	57
Test Set, Instrument Display System Bench	T20861	$69,151	42	42	42	42	90
Tactical Water Purification System (TWPS)	T14017	$450,000	121	125	125	125	140
Truck, Forklift, DED 6k lb, RT, Ammo Hdlg	T48944	$72,370	489	489	489	489	134
Test Set, Transponder, AN/APM-421	T49392	$30,370	24	24	24	24	143
Truck, Forklift, DED 4k lb, Rough Terrain	T49255	$75,000	316	316	316	316	303
Shop Equipment Auto Maint & Repair	T24660	$120,827	151	151	151	151	462
ROWPU Water Purification System, 3000 GPH	W47225	$748,000	66	66	66	66	66
Test Facilities Kit, MK-994/AR	V61444	$20,894	115	115	115	115	178
Test Set, Stabilator Line/SAS	T93517	$41,191	200	200	200	200	146
Test Set, Aviator Night Vis Imag Sys, TS-3895	T53471	$10,424	336	336	336	336	693
Test Set, Elect Sys Direct Support (DESETS)	T52849	$561,312	85	85	85	85	128
Tool Kit Electric Equipment, TK-101/GSQ	W37483	$1,324	4,352	4,352	4,352	4,352	3,739
Test Kit Mask Protective, M41	T62350	$7,000	2,833	2,833	2,833	2,833	2,723
Tent, Frame Type Maint Medium Light Metal	V48441	$13,422	155	155	155	155	0
Kitchen, Company Level, Field Feeding	K28601	$7,511	173	173	173	173	976
Test Set, Radar TS-4530()/UPM	T99847	$9,944	933	933	933	933	594
Tool Set: SATS Module 2	T65562	$9,795	19	19	19	19	102
Water Storage/Distribution Set, 800k gal	W37311	$200,508	6	6	6	6	12
Kitchen, Field, Mtd on M103A3 Tlr	L28351	$104,246	1,107	1,107	1,107	1,107	560
Radio Test Set, AN/PRM-34()	R93169	$6,500	2,298	2,298	2,298	2,298	3,310
HEMTT Aviation Refueling System (HTARS)	R66273	$24,460	166	166	166	166	225
Fuel System Supply Point, Portable 60k gal	J04717	$30,213	18	18	18	18	15
Electronic Shop Avionics, AN/ASM-146	H01907	$124,000	389	389	389	389	882
Test Set, Diagnostic	D12196	$9,672	84	84	84	84	216
Test Set, Electronic, TS-4348/UV	E03826	$649	8,613	8,613	8,613	8,613	9,047
Force Protection							
Stryker NBC Reconnaissance Vehicle, M1135	N96543	$2,320,389	3	3	3	3	107
NBC Reconnaissance System, M93A1 FOX	R41282	$3,000,000	7	7	7	7	0
Chemical Agent Alarm, M22	A33020	$10,000	7,990	7,990	7,990	7,990	16,103
Armored Security Vehicle (Asv), M1117	A93374	$809,500	472	585	585	585	1,328
Chemical Agent Monitor, Improved (ICAM)	C05701	$7,500	8,757	8,757	8,757	8,757	10,975
Decontaminating Apparatus, M17	D82404	$23,121	100	100	100	100	887
Mask, Protective, Combat Vehicle, M42	M18526	$331	34,061	34,606	34,606	34,606	22,279
Radiac Set, AN/VDR-2	R20684	$1,950	19,423	19,423	19,423	19,423	20,845
Radiac Set, AN/PDR-75	R30925	$2,978	2,561	2,658	2,658	2,658	3,536
Mask, Chemical Biological, M40	M12418	$265	339,344	339,344	339,344	339,344	307,842
Radiac Set, AN/PDR-77	R30993	$4,312	762	762	762	762	1,103
Radiac Set, AN/UDR-13	R31061	$631	26,869	26,869	26,869	26,869	29,780
Chem-Bio Protective Shelter (CBPS)	C07506	$622,051	1	1	1	1	291
Simplified Collective Protection Equip, M20	C79000	$17,599	1,195	1,195	1,195	1,195	2,240

Table 1

ARNG
Consolidated Major Item Inventory and Requirements

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Chemical Agent Alarm, M8A1	A32355	$8,432	8,197	8,197	8,197	8,197	691
General Engineering							
Truck Concrete, Mobile Mixer 8 Cu Yd (CCE)	T42725	$132,518	21	21	21	21	0
Scraper Elevating, SP Non-sectionalized	S29971	$162,596	0	0	0	0	42
Scraper Earth Moving SP, 14-18 Cu Yd	S56246	$149,523	363	364	379	392	410
Grader Road Motorized, DED Sectionalized	J74886	$223,471	8	8	8	8	87
Compactor, High Speed	E61618	$171,438	105	105	105	105	112
Scraper Elevating, SP Sectionalized	S30039	$324,218	130	130	130	130	84
Crane, Whl-mtd, 25-ton, ATEC AT422T	C36586	$313,521	159	159	159	159	147
Excavator, Hydraulic (HYEX) Type II	E41791	$435,755	13	13	13	13	10
Grader Road Motorized, DED Hvy	G74783	$98,045	578	619	619	619	353
Tractor, FT, Med, Cat D7 w/Scarif Winch	W76816	$205,000	515	515	542	565	402
Tractor, FT, Med, Cat D7 w/Scarif Ripper	W83529	$245,275	322	322	355	383	303
Excavator, Hydraulic (HYEX) Type I	E27792	$236,830	76	76	76	76	133
Tractor, FT, Hvy, CAT D8K-8-S	W88699	$197,322	32	32	32	32	0
Tractor Full-tracked High-speed, DEUCE	T76541	$432,799	43	43	43	43	47
Tactical Water Distrib Eq Set, (TWDS RDF)	T09094	$660,000	6	6	6	6	8
Loader Scoop Type, DED w/5 Cy Gp Bucket	L76321	$147,930	151	159	159	159	40
Distributor Water Tank, 6k gal, Tlr-mtd	D28318	$30,289	85	85	85	85	217
HEMTT Tactical Firefighting Truck, M1142	T82180	$640,131	41	41	51	61	39
Fire Fighting Equipment Set, Truck-mtd	H56391	$151,000	14	14	14	14	37
Maneuver Combat Vehicles							
Carrier Armored Command Post	C11158	$374,086	261	261	261	261	423
Carrier 120mm Mortar, SP Armored	C10990	$318,308	133	133	133	133	119
Carrier, Command Post, M577a1	D11538	$345,787	430	430	430	430	132
Tank, Combat, 1220mm Gun, M1A2	T13305	$4,445,399	15	15	15	15	58
Stryker Engineer Squad Vehicle, M1132	J97621	$2,320,389	11	11	11	11	12
Stryker Antitank Guided Missile Vehicle, M1134	A83852	$2,320,389	6	6	6	6	9
Tank, Combat, 120mm, M1A1 Abrams	T13168	$2,393,439	468	584	584	584	477
Stryker Reconnaissance Vehicle, M1127	R62673	$2,320,389	50	50	50	50	51
Stryker Infantry Carrier Vehicle, M1126	J22626	$2,320,389	142	142	142	142	128
Bradley Fighting Veh, Cavalry, M3A3	F90796	$4,021,449	0	0	0	0	29
Bradley Fighting Veh, Infantry, M2A3	F60564	$4,409,064	14	14	14	14	60
Bradley Fighting Veh, Infantry, M2A2 w/ODS	M31793	$1,311,639	35	69	69	69	91
Bradley Fighting Veh, Infantry, M2A0	J81750	$1,061,457	4	4	4	4	6
Bradley Fighting Veh, Infantry, M2A2	F40375	$1,349,348	466	527	527	527	485
Bradley Fighting Veh, Cavalry, M3A2	F60530	$1,144,000	94	123	123	123	230
Bradley Fighting Veh, Cavalry, M3A0	C76335	$1,056,845	6	6	6	6	6
Stryker Fire Support Vehicle, M1131	F86821	$2,320,389	12	12	12	12	13
Recovery Vehicle, Medium, M88A1	R50681	$1,210,755	384	384	384	384	240
Stryker Commanders Vehicle, M1130	C41314	$2,320,389	27	27	27	27	31
Stryker Medical Evacuation Vehicle, M1133	M30567	$2,320,389	15	15	15	15	16
Stryker Mortar Carrier Vehicle, M1129	M53369	$2,320,389	19	19	19	19	36

Table 1

ARNG
Consolidated Major Item Inventory and Requirements

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Stryker Mobile Gun System Vehicle, M1128	M57720	$2,320,389	13	13	13	13	27
Tank, Combat, 105mm, M1 Abrams	T13374	$1,645,697	8	8	8	8	5
Armored Personnel Carrier, M113A1/A2	D12087	$244,844	54	54	54	54	6
Armored Personnel Carrier, M113A3	C18234	$405,815	1,005	1,005	1,005	1,005	922
Combat Vehicle, Anti-tank, ITV M901A1	E56896	$393,062	37	37	37	37	6
Manuever Systems							
Night-vision Sight, AN/UAS-12	N04982	$116,014	178	178	178	178	669
Launcher, TOW II ATGM M220A1	L45740	$133,000	114	114	114	114	5
Target Acq Sys, TOW Improved ITAS M41	T24690	$1,010,000	561	561	561	561	666
Driver Vision Enhancer, AN/VAS-5	D41659	$35,000	2,414	2,431	2,431	2,431	24,550
Long Range Adv Scout Surveill System, AN/TAS-8	S02976	$400,000	733	964	1,092	1,102	1,022
Night-vision Sight, AN/UAS-11(V)1	N05050	$68,000	4	4	4	4	156
Camouflage Screen Support System	C89070	$335	43,021	43,021	43,021	43,021	0
Camouflage Net System, AN/USQ-159	C89480	$909	75,805	75,805	75,805	75,805	0
Camouflage Screen Sys, w/o Support Sys	C89145	$903	30,320	30,320	30,320	30,320	1,329
Medical Field Systems							
Ventilator, Volume, Portable	V99788	$12,912	247	272	290	297	287
Medical Equip Set, Trauma Field (2)	M30499	$161,385	959	959	959	959	887
Medical Equip Set, Air Ambulance	M29213	$99,176	265	265	265	265	282
Medical Equip Set, Chem Agent Patient Treat	M23673	$30,596	849	849	849	849	891
Medical Equip Set, Sick Call Field (2)	M30156	$52,297	809	809	809	809	710
Medical Equip Set, Ground Ambulance	M26413	$35,203	2,035	2,035	2,035	2,035	1,822
Medical Equip Set, Special Forces, Tactical	M29999	$115,275	182	182	182	182	140
Surgical Instrument & Supply Set, Individual	U65480	$4,197	3,660	3,660	3,660	3,660	5,159
Medical Equip Set, Patient Holding Field	M29633	$132,774	123	123	123	123	108
Dental Equip Set, Comprehensive Dent Field	D43802	$56,562	52	52	52	52	66
Defibrillator Monitor Recorder	D86072	$29,917	298	325	360	375	345
Other Systems							
Bridge, Fixed Highway, MILB11844	C23017	$303,673	7	7	7	7	106
Soldier Systems							
Infrared Illuminator, AN/PEQ-2	J03261	$1,357	87,743	87,743	87,743	87,743	64,620
Thermal Weapon Sight, AN/PAS-13B(V)1	S60356	$17,000	9,602	11,873	13,323	13,323	24,030
Thermal Weapon Sight, AN/PAS-13	S90535	$17,591	16,246	19,461	21,523	22,230	27,498
Rail Adapter, Weapon Mounted M4	A20044	$69	117,331	117,331	117,331	117,331	111,426
Night-vision Sight, AN/PVS-4 w/Img	N04732	$8,535	14,529	14,529	14,529	14,529	1,602
Thermal Weapon Sight, AN/PAS-13A	S90603	$19,306	15,368	18,753	20,024	20,510	28,450
Monocular Night-vision Device, AN/PVS-14	M79678	$3,607	157,769	160,769	160,769	160,769	32,988
Night-vision Goggles, AN/PVS-7B	N05482	$6,000	50,650	50,650	50,650	50,650	205,166
Night-vision Sight, Sniper, AN/PVS-10	S90433	$9,546	508	512	512	512	286
Laser IR Observation Set (MELIOS), AN/PVS-6	M74849	$22,015	1,329	1,329	1,329	1,329	11,051
Night-vision Goggles, AN/PVS-5	N04456	$4,300	16,283	16,283	16,283	16,283	47
Telescope, Straight, M145	T60185	$707	14,149	14,149	14,149	14,149	8,415
Night-vision Sight, Crew Serv Wpn, AN/TVS-5	N04596	$3,500	3,159	3,159	3,159	3,159	1,123

Table 1

ARNG
Consolidated Major Item Inventory and Requirements

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Reflex Sight, Collimator, M68	S60288	$283	210,899	210,899	210,899	210,899	107,191
Machine Gun Ring Mount, Cal .50, M36/M66	M74364	$4,200	7,354	7,354	7,354	7,354	13,753
Machine Gun Tripod Mount, 7.62mm, M122	M75714	$619	6,148	6,148	6,148	6,148	85
Soldier Weapons							
Machine Gun, 5.56mm, M249, Light	M39263	$2,779	4,871	4,871	4,871	4,871	8,045
Launcher, Grenade, 40mm, M203A1	L46007	$593	614	614	614	614	24
Launcher, Grenade, 40mm, M203A2	L69012	$1,060	13,030	13,030	13,030	13,030	562
Rifle, 5.56mm, M16A2	R95035	$503	151,996	151,996	151,996	151,996	145,268
Rifle, 7.62mm, Sniper M24	R95387	$7,029	656	656	656	656	3,278
Machine Gun, 7.62mm, M240H	M92591	$8,593	3,183	3,183	3,183	3,183	1,541
Launcher, Grenade, 40mm, M203	L44595	$593	10,861	10,861	10,861	10,861	2,644
Command Launch Unit, Javelin	C60750	$231,671	2,443	2,443	2,443	2,443	2,778
Rifle, 5.56mm, M16A4	R97175	$950	25,044	25,044	25,044	25,044	3,272
Machine Gun, 7.62mm, M240B	M92841	$6,000	12,052	12,052	12,052	12,052	13,973
Carbine, 5.56mm, M4	R97234	$1,329	141,331	145,347	145,347	145,347	151,569
Machine Gun, Grenade, 40mm, MK19 MOD III	M92362	$15,320	9,005	9,223	9,223	9,223	8,981
Machine Gun, 5.56mm, M249	M09009	$3,830	29,621	29,621	29,621	29,621	25,547
Machine Gun, 7.62mm, M240C	M92420	$4,890	956	956	956	956	1,005
Machine Gun, 7.62mm, M60	L92386	$5,864	913	913	913	913	206
Shotgun, 12-gauge Riot Type	T39223	$238	8,851	8,851	8,851	8,851	7,674
Machine Gun, Cal .50, M2	L91975	$12,685	14,463	15,971	15,971	15,971	13,938
Pistol, 9mm Automatic, M9	P98152	$386	70,578	70,578	70,578	70,578	61,818
Riot Control Agent Disperser, M33	G22348	$724	471	471	471	471	2,454
Strike							
Fire Support Vehicle, Knight, M707	S50205	$947,000	62	62	62	62	4
High Mobility Artillery Rocket Sys (HIMARS)	H53326	$2,500,000	132	168	190	190	195
Launcher, MLRS Improved, M270A1	M82581	$2,168,500	57	57	57	57	32
Howitzer, Medium, Sp, 155mm, M109A6	H57642	$1,435,000	291	291	291	291	242
Bradley Fire Support Team Veh, M7	F86571	$903,195	30	30	30	30	70
Armored Personnel Carrier, FISTV, M113	C12155	$553,367	94	94	94	94	9
Multiple Launch Rocket System (MLRS), M270	L44894	$1,973,897	80	80	80	80	10
Laser Designator Rangefinder, AN/PED-1	R60282	$300,000	245	318	412	504	1,056
Carrier, Cargo, M548	D11049	$323,416	109	109	109	109	214
Carrier, Ammo Tracked, M992A2	C10908	$1,140,667	281	281	281	281	236
Radar Set, AN/TPQ-37(V)1	A41666	$14,465,400	9	9	9	9	16
Radar Set, AN/TPQ-36(V)8	R14284	$10,091,900	19	19	19	19	29
Howitzer, Medium Towed, 155mm, M198	K57821	$1,032,337	76	76	76	76	35
Howitzer, Medium, Sp, 155mm, M109A2-A5	K57667	$923,286	9	9	9	9	8
Howitzer, Light Towed, 105mm, M119	H57505	$1,100,000	292	297	297	297	328
Support Systems							
Boat, Landing Craft, Inflatable 7-person	B84293	$15,494	142	142	142	142	365
PLS Demountable Cargo Bed	B83002	$16,633	16,470	16,722	16,722	16,722	15,846
Truck, Cargo, 1/2 To 1-ton, 4x4	X39893	$27,242	1,367	1,367	1,367	1,367	7,150

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Truck, Cargo, 1/2 To 3/4-ton, 4x2	X39598	$18,000	488	488	488	488	5,823
Truck, Carryall, 1/4 To 1 1/4-ton	X42201	$28,000	400	400	400	400	4,894
Training Set, Moving Target Simulator (Stinger/Redeye)	X04802	$4,377,780	1	1	1	1	50
PLS Container Handling Unit (CHU)	C84862	$34,613	143	143	143	143	835
Bus, Motor, 28-44 Passenger	C39977	$62,106	47	47	47	47	1,224
Automobile Sedan, Class II Compact	B04441	$9,176	306	306	306	306	8,790
Trailers							
Semitrailer Tanker, 5000-gal Bulk Haul, M967	S10059	$77,550	336	336	336	336	360
Semitrailer Tanker, 5000-gal POL, M969	S73372	$97,413	494	494	494	494	234
Trailer, Cargo, 1.5-ton, M105	W95811	$10,245	0	0	0	0	148
Trailer, Cargo, 3/4-ton, High Mobility, M1101	T95992	$8,954	8,753	9,149	9,149	9,149	10,878
Trailer, Cargo, 5/4-ton, High Mobility, M1102	T95924	$8,954	4,895	4,938	4,938	4,938	6,573
Semitrailer, 40-ton Lowbed, M870	S70594	$51,900	1,258	1,539	1,539	1,539	1,464
Semitrailer, 34-ton Flatbed, M872	S70159	$43,252	3,430	3,430	3,430	3,430	4,349
Semitrailer, 70-ton Lowbed, M1000 HETS	S70859	$229,219	627	627	627	627	686
Trailer, Cargo, 5-ton MTV, M1095	T95555	$62,829	920	1,625	1,924	1,984	5,940
Trailer, Cargo, 2.5-ton LMTV, M1082	T96564	$34,569	2,424	2,424	2,456	2,487	4,377
Trailer, Tank Water, 400 gal, M1112	W98825	$16,000	3,339	3,339	3,339	3,339	3,303
Semitrailer, 22.5-ton Flatbed, M871	S70027	$33,156	3,960	3,960	3,960	3,960	3,510
Trailer, Tank Water (CAMEL), 900 gal	Z36683		4	59	100	106	33
Semitrailer Van, 6-ton Repair Parts, M749/M750	S74832	$32,952	81	81	81	81	0
Semitrailer Van, 6-ton, Electr Shop, M146	S75038	$6,532	243	243	243	243	218
Trailer, HEMAT, 11-ton, M989A1	T45465	$34,714	1,669	1,669	1,669	1,669	997
PLS Trailer, 16.5-ton, M1076	T93761	$46,731	4,227	4,231	4,231	4,231	4,578
Trailer, Cargo, 3/4-ton, M101	W95537	$4,474	2,468	2,468	2,468	2,468	39
Trucks							
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	$278,409	513	513	513	513	392
HEMTT Fuel Tanker, 2500gal, M978	T87243	$268,440	1,309	1,309	1,309	1,309	1,648
HEMTT Cargo Truck, w/LHS, M1120	T96496	$226,800	916	916	916	916	3,070
LMTV 2.5-ton Cargo Truck, M1078	T60081	$176,428	4,153	4,153	4,153	4,153	8,149
M35-series 2.5-ton Truck, Cargo, M35A2	X40009	$56,500	0	0	0	0	109
M809/M939-series 5-ton Truck Van, M820/M934	X62237	$145,700	195	195	195	195	10
Truck Tractor, 5-ton, M931	X59326	$86,203	1,776	1,776	1,776	1,776	29
M809/M939-series 5-ton Dump Truck, M817/M929	X43708	$100,887	949	949	949	949	0
M35-series 2.5-ton Truck, Cargo, M35A2 W/W	X40146	$56,500	0	0	0	0	9
M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	$74,450	4,593	4,593	4,593	4,593	147
M809/M939-series 5-ton Cargo Truck, LWB, M813	X40831	$53,248	0	0	0	0	15
M809/M939-series 5-ton Wrecker, M816/M936	X63299	$168,960	630	630	630	630	4
HEMTT Cargo Truck, w/Med Crane, M985	T39586	$272,033	760	760	760	760	376
HMMWV Armt Carrier, ECV, M1151	T34704	$119,000	3,417	3,417	3,417	3,417	3,704
Truck Tractor, 20-ton MET, M920	T61171	$74,288	9	9	9	9	4
LMTV 2.5-ton Cargo Truck, w/ LAPES/AD, M1081	T41995	$103,220	73	73	73	73	109
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	$149,600	530	530	530	530	1,220

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
HMMWV Ambulance, 2-litter, M996	T38707	$49,357	36	36	36	36	5
HMMWV Ambulance, 4-litter, M997	T38844	$113,998	1,256	1,256	1,256	1,256	1,700
LMTV 2.5-ton Cargo Truck, M1079	T93484	$230,363	193	193	193	193	782
HMMWV Cargo/Trp Carrier, M998	T61494	$36,076	15,526	15,526	15,526	15,526	21,020
HMMWV Tow Carrier, M966	T05096	$49,521	527	527	527	527	447
HMMWV Armt Carrier, Armd, M1026 W/W	T92310	$39,518	1,714	1,714	1,714	1,714	862
HMMWV Truck, Utility, ECV, Up-armored, M1114	T92446	$146,844	25	25	25	25	578
HMMWV Armt Carrier, Armd, M1025	T92242	$74,969	3,276	3,276	3,276	3,276	1,180
HMMWV Utility, ECV, M1113	T61630	$61,042	553	553	553	553	4,064
HMMWV Armt Carrier, ECV, M1151 w/AOA	T92514	$95,548	35	35	35	35	0
HMMWV Shelter Carrier, Heavy, M1097	T07679	$61,665	11,170	11,877	12,424	13,518	3,005
HMMWV Cargo/Trp Carrier, W/W, M1038	T61562	$36,672	1,028	1,028	1,028	1,028	368
HMMWV Shelter Carrier, M1037	T07543	$36,932	630	630	630	630	291
HEMTT Cargo Truck, w/Lt Crane, M977	T59278	$251,388	333	333	333	333	191
HEMTT Cargo Truck, w/Med Crane, M985 W/W	T39654	$282,002	155	155	155	155	65
PLS Transporter, M1075	T40999	$360,139	1,021	1,021	1,021	1,021	1,695
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	$260,574	136	136	136	136	207
HEMTT Wrecker, M984	T63093	$379,000	745	745	745	745	982
MTV 5-ton Cargo Truck, M1084	T41203	$218,378	294	294	294	294	1,091
MTV 5-ton Cargo Truck, M1083 W/W	T41135	$182,089	422	422	422	422	2,246
Truck Tractor, 14-ton LET, M916	T91656	$166,223	2,059	2,059	2,059	2,059	478
Truck Tractor, 14-ton Line Haul, M915	T61103	$162,968	2,460	2,460	2,460	2,460	2,325
PLS Transporter, M1074	T41067	$288,015	597	597	597	597	160
Truck, Dump, 20-ton, M917	X44403	$211,764	733	733	733	733	602
MTV 5-ton Cargo Truck, M1085	T61704	$170,073	65	65	65	65	1,005
MTV 5-ton Cargo Truck, M1085 W/W	T61772	$119,567	5	5	5	5	0
MTV 5-ton Cargo Truck, w/ LAPES/AD,M1093 W/W	T41104	$119,265	13	13	13	13	36
MTV 5-ton Cargo Truck, w/ LAPES/AD, M1093	T41036	$118,579	14	14	14	14	42
MTV 5-ton Cargo Truck, W/W, w/MHE, M1086	T61840	$209,309	6	6	6	6	0
MTV 5-ton Cargo Truck, M1083	T61908	$184,333	3,101	3,101	3,101	3,101	7,826
MTV 5-ton Tractor Truck, M1088	T61239	$167,746	1,629	1,629	1,629	1,629	3,084
Truck Tractor, HETS, M1070	T59048	$256,704	618	618	618	618	746
MTV 5-ton Dump Truck, M1090 W/W	T64979	$139,015	0	0	0	0	260
MTV 5-ton Tractor Truck, M1088 W/W	T61307	$175,733	104	104	104	104	608
MTV 5-ton Wrecker, M1089	T94709	$331,680	332	332	332	332	870
MTV 5-ton Dump Truck, M1090	T64911	$209,309	21	21	21	21	896

ARNG
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 2011.*

Nomenclature	Equip No.	Average Age	Remarks
Aircraft - Rotary Wing			
Helicopter, Attack AH-64A	H28647	20	
Helicopter, Attack AH-64D	H48918	11	
Helicopter, Cargo CH-47D	H30517	21	
Helicopter, Utility, UH-60A	K32293	28	
Helicopter, Utility, UH-60L	H32361	16	
Helicopter, MEDEVAC HH-60M	M33458	2	
Helicopter, Utility, UH-60M	H32429	2	
Helicopter, Observation, OH-58 A/C	H31110	40	
Helicopter, Observation, OH-58D	A21633	16	
Helicpoter, Light Utility, UH-72A	H31329	2	
Aircraft - Fixed Wing			
Airplane, Cargo Transport, C-12D	A29812	28	
Airplane,Cargo Transport, C-12U	BA108Q	25	
Airplane, Cargo Transport, C-23B	A29880	18	
Airplane, Cargo Transport, C-26	A46758	12	
Artillery & Missiles			
Howitzer, Medium, Sp, 155mm, M109A1-A5	K57667	39	
Howitzer, Medium, Sp, 155mm, M109A6	H57642	24	
Bridging Equipment			
Boat Bridge Erection, MK1/MK2	B25476	21	
Boat Cradle, Improved (IBC), M14	C33925	8	
Interior Bay Bridge, Floating	K97376	16	
Launcher, M60 Tank Chassis, AVLB	L43664	35	
Pallet, Bridge Adapter (BAP) M15	P78313	7	
Ramp Bay Bridge Floating	R10527	20	
Communications & Electronics Equipment			
Computer System, AN/TYQ-109(V)1	C27707	7	
Engineer & Construction Vehicles			
Compactor, High Speed	E61618	12	
Crane, Whl-mtd, 25-ton, ATEC AT422T	C36586	10	
Excavator, Hydraulic (HYEX) Type I	E27792	12	
Excavator, Hydraulic (HYEX) Type II	E41791	9	
Grader Road Motorized, DED Hvy	G74783	26	
Grader Road Motorized, DED Sectionalized	J74886	28	
Loader Scoop Type, DED w/5 Cy Gp Bucket	L76321	32	
Loader Scoop Type, DED w/MultiPurpose Bucket	L76556	26	
Scraper Earth Moving SP, 14-18 Cu Yd	S56246	26	
Scraper Elevating, SP Sectionalized	S30039	3	
Tractor Full-tracked High-speed, DEUCE	T76541	9	
Tractor, FT, Hvy, CAT D8K-8-S	W88699	33	

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Tractor, FT, Med, Cat D7 w/Scarif Ripper	W83529	24	
Tractor, FT, Med, Cat D7 w/Scarif Winch	W76816	31	
Tractor, Full-tracked, Armored, M9 (ACE)	W76473	19	
Tractor, Whld Excavator, SEE	T34437	22	
Truck Concrete, Mobile Mixer 8 Cu Yd (CCE)	T42725	31	
Truck, Forklift, ATLAS	T73347	6	
Truck, Forklift, DED 4k lb, Rough Terrain	T49255	27	
Truck, Forklift, DED 50k lb, RT, Cont Hdlr	T48941	28	
Truck, Forklift, DED 6k lb, RT, Ammo Hdlg	T48944	18	
Truck, Dump, 20-ton, M917	X44403	19	
Generator Sets & Power Plants			
Generator Set, 2kW, MEP-501A	G36237	10	
Generator Set, 5kW, MEP-802A TQG	G11966	10	
Generator Set, 5kW, PU-797 TQG	G42238	8	
Generator Set, 10kW, MEP-803A TQG	G74711	9	
Generator Set, 10kW, PU-753/M	G40744	21	
Generator Set, 10kW, PU-798 TQG	G42170	9	
Generator Set, 15kW, PU-801/A TQG	G78374	9	
Generator Set, 15kW, PU-802 TQG	G53778	6	
Generator Set, 30kW, PU-803/B/G	G35851	9	
Generator Set, 60kW, PU-805 TQG	G78306	14	
Power Plant, 10kW, AN/MJQ-18	P28015	23	
Power Plant, 10kW, AN/MJQ-37 TQG	P42262	12	
Power Plant, 30kW, AN/MJQ-40 TQG	P42126	10	
Night Vision Equipment			
Aviation Night-vision System (ANVIS), AN/AVS-6	A06352	7	
Other Support Equipment			
Fire Fighting Equipment Set, Truck-mtd	H56391	26	
Kitchen, Containerized, CK	C27633	6	
Tactical & Support Vehicles			
HEMTT Cargo Truck, w/LHS, M1120	T96496	4	
HEMTT Cargo Truck, w/Lt Crane, M977	T59278	22	
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	23	
HEMTT Cargo Truck, w/Med Crane, M985	T39586	19	
HEMTT Cargo Truck, w/Med Crane, M985 W/W	T39654	20	
HEMTT Common Bridge Transporter, M1977	T91308	11	
HEMTT Fuel Tanker, 2500gal, M978	T87243	14	
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	17	
HEMTT Wrecker, M984	T63093	14	
HMMWV Ambulance, 2-litter, M996	T38707	22	
HMMWV Ambulance, 4-litter, M997	T38844	21	
HMMWV Armt Carrier, Armd, M1025	T92242	21	
HMMWV Armt Carrier, Armd, M1026 W/W	T92310	21	

ARNG   Table 2
Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
HMMWV Armt Carrier, ECV, M1151	T34704	2	
HMMWV Cargo/Trp Carrier, M998	T61494	20	
HMMWV Cargo/Trp Carrier, W/W, M1038	T61562	21	
HMMWV Shelter Carrier, Heavy, M1097	T07679	12	
HMMWV Shelter Carrier, M1037	T07543	20	
HMMWV Tow Carrier, M966	T05096	23	
HMMWV Truck, Utility, ECV, M1113	T61630	10	
HMMWV Truck, Utility, ECV, Up-armored, M1114	T92446	10	
LMTV 2.5-ton Cargo Truck, M1078	T60081	5	
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	5	
LMTV 2.5-ton Cargo Truck, M1079	T93484	5	
MTV 5-ton Cargo Truck, M1083	T61908	4	
MTV 5-ton Cargo Truck, M1083 W/W	T41135	5	
MTV 5-ton Cargo Truck, M1084	T41203	4	
MTV 5-ton Cargo Truck, M1085	T61704	5	
MTV 5-ton Cargo Truck, M1085 W/W	T61772	10	
MTV 5-ton Dump Truck, M1090	T64911	14	
MTV 5-ton Tractor Truck, M1088	T61239	6	
MTV 5-ton Tractor Truck, M1088 W/W	T61307	5	
MTV 5-ton Wrecker, M1089	T94709	5	
PLS Container Handling Unit (CHU)	C84862	5	
PLS Demountable Cargo Bed	B83002	15	
PLS Trailer, 16.5-ton, M1076	T93761	6	
PLS Transporter, M1074	T41067	16	
PLS Transporter, M1075	T40999	7	
Semitrailer Tanker, 5000-gal Bulk Haul, M967	S10059	13	
Semitrailer Tanker, 5000-gal POL, M969	S73372	16	
Semitrailer Van, 6-ton Repair Parts, M749/M750	S74832	37	
Semitrailer Van, 6-ton, Electr Shop, M146	S75038	43	
Semitrailer, 22.5-ton Flatbed, M871	S70027	17	
Semitrailer, 34-ton Flatbed, M872	S70159	22	
Semitrailer, 40-ton Lowbed, M870	S70594	21	
Semitrailer, 70-ton Lowbed, M1000 HETS	S70859	11	
Trailer, Cargo, 1.5-ton, M105	W95811	35	
Trailer, Cargo, 2.5-ton LMTV, M1082	T96564	4	
Trailer, Cargo, 3/4-ton, High Mobility, M1101	T95992	2	
Trailer, Cargo, 3/4-ton, M101	W95537	33	
Trailer, Cargo, 5/4-ton, High Mobility, M1102	T95924	4	
Trailer, Cargo, 5-ton MTV, M1095	T95555	4	
Trailer, HEMAT, 11-ton, M989A1	T45465	11	
Truck Tractor, 14-ton LET, M916	T91656	11	
Truck Tractor, 14-ton Line Haul, M915	T61103	15	
Truck Tractor, 20-ton MET, M920	T61171	30	

ARNG
Average Age of Equipment

Table 2

Nomenclature	Equip No.	Average Age	Remarks
Truck Tractor, HETS, M1070	T59048	12	
Tracked and Other Combat Vehicles			
Armored Personnel Carrier, FISTV, M113	C12155	39	
Armored Personnel Carrier, M113A1/A2	D12087	44	
Armored Personnel Carrier, M113A3	C18234	23	
Bradley Fighting Veh, Cavalry, M3A0	C76335	26	
Bradley Fighting Veh, Cavalry, M3A2	F60530	22	
Bradley Fighting Veh, Infantry, M2A0	J81750	26	
Bradley Fighting Veh, Infantry, M2A2	F40375	17	
Carrier, Ammo Tracked, M992A2	C10908	23	
Carrier, Cargo, M548	D11049	41	
Carrier, Command Post, M577A1	D11538	34	
Recovery Vehicle, Medium, M88A1	R50681	34	
Tank, Combat, 105mm, M1 Abrams	T13374	26	
Tank, Combat, 120mm, M1A1 Abrams	T13168	19	
Water & Petroleum Equipment			
Distributor Water Tank, 6k gal, Tlr-mtd	D28318	26	
ROWPU Water Purification System, 3000 GPH	W47225	17	
Tank & Pump Unit, Liquid Dispensing Trk-mtd	V12141	19	
Trailer, Tank Water, 400 gal, M1112	W98825	26	

Table 3

ARNG
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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.

Nomenclature	FY 2012	FY 2013	FY 2014
P-1R data from FY 2012 President's Budget Submission was not available in time for publication in the NGRER.			
The FY 2012 P-1R will be available on the Office of the Under Secretary of Defense (Comptroller) public web site (http://comptroller.defense.gov/index.html) upon release of the FY 2012 President's Budget Submission.			

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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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
FY 2009 Title III NGREA Equipment			
Family of Medium Tactical Vehicles	$123,281,000		
Family of Light Tactical Vehicles (HMMWV Variants)	102,787,000		
Tactical Radios	69,291,000		
Blackhawk Modernization Program	32,818,000		
Night Vision	25,356,000		
Light Utility Helicopter-Mission Equipment Package	24,000,000		
Chemical Decontamination	17,817,000		
JFHQ and Command & Control Systems	17,070,000		
AH-64 A to D Upgrades	10,000,000		
Horizontal Construction Equipment	8,543,000		
MILSATCOM	7,935,000		
Maintenance Systems	6,383,000		
Digital Enabler	6,363,000		
Small Arms	5,893,000		
Tactical Trailers	5,517,000		
Medical Systems	3,898,000		
Rte & Area Clearance	3,811,000		
Liquid Logistics Storage & Distribution Systems	3,789,000		
Force Protection	2,365,000		
Generators	1,668,000		
FY 2009 Title IX NGREA Equipment			
Family of Medium Tactical Vehicles (FMTV)	123,173,990		
Army Battle Command Systems (ABCS)	30,000,000		
Light Utility Helicopter Mission Enhancement Program (LUH MEP)	29,955,039		
Heavy Tactical Trailers	18,682,650		
Commerical Off-the-shelf Tactical Radios	16,210,000		
CBRN Soldier Protection (ex: Chem & Bio Protected Shelter System)	12,466,491		
Thermal Weapons Sights (TWS)	10,474,926		
Aviation Health Information Management System (AV-HIMS)	10,000,000		
Construction Equipment (ex: Loaders; Scrapers)	7,713,552		
Drivers Vision Enhancers (DVE)	7,573,720		
UH-60 extended Range Fuel Storage Tanks (ERFST)	7,000,000		
Field Feeding Equipment (ex: Containerized Kitchens)	5,040,000		
Family of Heavy Tactical Vehicles (FHTV)	4,992,060		

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
Maintenance Support Equipment (MSE) (ex: Electrical Test Sets)	4,250,000		
Blackhawk Multi-year Program (MYP)	4,022,220		
Blackhawk Medical Evacuation (MEDEVAC)	2,200,000		
Liquid Logistics Storage and Distribution	2,090,000		
SIPRNET Level I Access Equipment	1,944,530		
CBRNE Enhanced Response Force Package (CERFP)	1,047,500		
Logistics Network Communications	448,000		
Civil Support Team (CST) Equipment	438,000		
Logistics Automation (TC-AIMS)	277,200		
FY 2010 Title III NGREA Equipment			
Medical Support Equipment (ex: Ambulances)		$165,578,160	
Family of Medium Tactical Vehicles (FMTV)		109,295,298	
Light Utility Helicopter Mission Enhancement Program (LUH MEP)		59,344,282	
Automated Battle Command Training Simulators (ex: Constructive Simulation Suites, Digital Sys Integrator Sets)		47,157,720	
Digital Enablers (ex: Digital Computer System - AN/PYQ-6C, Interface Unit Comm Equip)		42,106,439	
Training Aids, Devices, Simulators, and Simulations Operations Trainer		38,738,895	
Civil Support Team (CST) (ex: Thermal Desorption System for Gas Chromatograph Mass Spectrometer)		13,470,000	
Wideband Global (Gapfiller) System (WGS)		12,960,000	
General Engineering Equipment (ex: Tractor, 15-Man Inflatable Assault Boat)		12,653,832	
Soldier Weapons/Systems (ex: Battlefield Anti-intrusion System - AN/PRS-9)		11,842,751	
Network Communications Security (ex: Secure VTC to BN/BDE)		11,150,000	
Chemical Decontamination Equipment (ex: CERFP Mass Casualty Decon Trailer)		10,231,300	
Shadow Crew Trainer (Unmanned Aerial Vehicle)		8,656,154	
Field Logistics Equipment (ex: Prefabricated Refrigerator, Wheeled Crane)		7,180,443	
Liquid Logistics Storage and Distribution (ex: 2000 gal Water Tank [HIPPO])		6,085,899	
Integrated Vehicle Health and Usage Monitoring System (IVHUMS)		4,368,000	
Field Maintenance Equipment (ex: Test Facilities Kit - MK-994/AR)		3,556,828	
Blackhawk Maintenance Trainer		3,000,000	
Aviation Support Equipment (ex: High Performance Hoist)		2,608,661	
Interim Medevac Mission Support System (IMMSS)		2,200,000	
Tactical Radios (ex: High Frequency Radio Set - AN/VRC-100(V)1)		2,150,000	
Tactical Trailers		664,723	
Total	**$778,584,878**	**$574,999,385**	

1. FY 2011 NGREA data from FY 2011 Defense Appropriations Bill was not available in time for publication in the NGRER. Data for FY 2011 will be provided in next year's NGRER.

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Table 5

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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Aircraft					
Helicopter, Cargo CH-47F	C15172	+3			
Helicopter, Utility, UH-60M	H32429		+3		
Aviation					
Power Unit Auxiliary, Aviation (AGPU)	P44627		+6		
Command System, Tactical, AN/TSQ-221	C61597		+3		
Battle Command and Control					
Computer System, AN/TYQ-109(V)1	C27707	+2	+1		
Shelter, Rigid Wall, Command Post	R98145		+1		
Computer Set, AN/UYK-128	C18378	+90			
Computer System, AN/UYQ-90(V)3	C78851		+7		
Computer System, AN/UYQ-90(V)2	C18278	+1			
Interface Unit Communications Equipment, OL-713(V)1/TYQ CSS VSAT	Z00560	+69	+10		
Computer Set, OL-582/TYQ	C18446	+6		+1	
Computer Set, OL-603/TYQ	C78827	+1	+5		
Interrogator Set, AN/TYX-1	J99233	+1			
Generator Set, 60kW, MEP-805A/B TQG	G74575			+1	
Power Plant, 30kW, AN/MJQ-40 TQG	P42126			+1	
Generator Set, 2kW, MEP-501A	G36237		+4		
Generator Set, 10kW, MEP-803A TQG	G74711		+6		
Generator Set, 2kW, MEP-531A	G36169		+1		
Generator Set, 5kW, PU-797 TQG	G42238		+5		
Computer System, AN/TYQ-105(V)1	C27503	+2	+5		
Battle Command Transport Networks					
Radio Set, SINCGARS AN/VRC 91F(C)	R68146	+35			
Radio Set, SINCGARS AN/PRC-119F(C)	R83141			+4	
Radio Set, SINCGARS AN/VRC-89F(C)	R44999	+3		+5	
Radio Set, SINCGARS AN/VRC-90F(C)	R68044	+10	+145		
Radio System, EPLRS	P49587	+1			
Radio Set, AN/PSC-5	R57606	+1			
Satellite Comm Terminal, AN/TSC-154	T81733	+1			
Computer System, AN/PYQ-10(C)	Z00384	+853	+1,818	+340	
BN Cmd Post (Switching Group), OM XXX	Z00564	+1			
Combat Mobility					
Tractor, Whld Excavator, SEE	T34437		+1		
Field Logistics					
Test Set, Elect Sys AN/PSM-95	T92889	+31	+3		

ARNG-5-1

Table 5

ARNG
Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Forward Repair System (FRS)	F64544		+3		
Kitchen, Containerized, CK	C27633	+1			
Tent, Ltwt Maintenance Enclosure (LME)	T49947		+2		
Food Sanitation Center	S33399	+1	+2	+5	
Tank & Pump Unit, Liquid Dispensing Trk-mtd	V12141		+2		
Forward Area Water Point Supply System	F42612	+2			
Tank, Liquid Storage	T32629	+9	+16		
Test Facilities Kit, MK-994/AR	V61444		+3		
Kitchen, Company Level, Field Feeding	K28601		+7	+4	
Tool Set: SATS Module 2	T65562			+1	
Radio Test Set, AN/PRM-34()	R93169		+3		
Electronic Shop Avionics, AN/ASM-146	H01907	+7	+39	+6	
Force Protection					
Chemical Agent Alarm, M22	A33020	+1			
Mask, Protective, Combat Vehicle, M42	M18526	+6			
Radiac Set, AN/VDR-2	R20684	+11	+4		
Radiac Set, AN/PDR-75	R30925			+8	
Mask, Chemical Biological, M40	M12418	+44	+442		
Radiac Set, AN/UDR-13	R31061	+8	+2		
Simplified Collective Protection Equip, M20	C79000	+6	+5		
General Engineering					
Grader Road Motorized, DED Sectionalized	J74886		+16		
Maneuver Combat Vehicles					
Bradley Fighting Veh, Infantry, M2A3	F60564		+1		
Bradley Fighting Veh, Infantry, M2A2	F40375		+6		
Maneuver Systems					
Driver Vision Enhancer, AN/VAS-5	D41659		+69		
Medical Field Systems					
Surgical Instrument & Supply Set, Individual	U65480		+27		
Soldier Systems					
Thermal Weapon Sight, AN/PAS-13B(V)1	S60356	+4	+9		
Thermal Weapon Sight, AN/PAS-13	S90535	+4	+25		
Night-vision Sight, AN/PVS-4 w/Img	N04732		+7		
Thermal Weapon Sight, AN/PAS-13A	S90603	+340	+226	+8	
Monocular Night-vision Device, AN/PVS-14	M79678	+2			
Night-vision Goggles, AN/PVS-7B	N05482	+461	+70	+407	
Laser IR Observation Set (MELIOS), AN/PVS-6	M74849	+15	+81		
Telescope, Straight, M145	T60185	+265	+7		
Reflex Sight, Collimator, M68	S60288	+9	+20		
Machine Gun Ring Mount, Cal .50, M36/M66	M74364			+1	
Machine Gun Tripod Mount, 7.62mm, M122	M75714	+13			
Soldier Weapons					
Machine Gun, 5.56mm, M249, Light	M39263	+4	+1		
Rifle, 5.56mm, M16A2	R95035		+256		

Table 5

ARNG
Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Command Launch Unit, Javelin	C60750	+8			
Machine Gun, 7.62mm, M240B	M92841	+343			
Carbine, 5.56mm, M4	R97234		+12	+8	
Machine Gun, Grenade, 40mm, MK19 MOD III	M92362	+1	+6		
Machine Gun, 5.56mm, M249	M09009	+40	+22		
Machine Gun, Cal .50, M2	L91975	+16	+6		
Pistol, 9mm Automatic, M9	P98152	+5	+122		
Strike					
Fire Support Vehicle, Knight, M707	S50205	+4			
Laser Designator Rangefinder, AN/PED-1	R60282	+23	+27		
Trailers					
Trailer, Cargo, 3/4-ton, High Mobility, M1101	T95992	+8	+7		
Trailer, Cargo, 5/4-ton, High Mobility, M1102	T95924	+25	+13		
Semitrailer, 40-ton Lowbed, M870	S70594		+2		
Semitrailer, 34-ton Flatbed, M872	S70159	+69	+1	+7	
Trailer, Cargo, 2.5-ton LMTV, M1082	T96564	+2			
Trailer, Tank Water, 400 gal, M1112	W9882	+2			
Trucks					
LMTV 2.5-ton Cargo Truck, M1078	T60081	+45	+5	+5	
M35-series 2.5-ton Truck, Cargo, M35A2	X40009		+1		
HMMWV Cargo/Trp Carrier, M998	T61494		+8		
HMMWV Utility, ECV, M1113	T61630		+43		
HMMWV Shelter Carrier, M1037	T07543		+13		
Truck Tractor, 14-ton LET, M916	T91656		+1		
MTV 5-ton Cargo Truck, M1085	T61704		+25		
MTV 5-ton Cargo Truck, M1083	T61908		+22	+14	

Table 6

ARNG
FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 Planned Transfers & Withdrawals							
Aviation Night-vision Sys, AN/AVS-6	A06352	+600	0				
Chemical Agent Alarm, M8A1	A32355	+41	0				
Chemical Agent Monitor, ICAM	C05701	+932	0				
Carbine, 5.56mm, M4A1	C06935	+9	0				
Chem-Bio Protective Shelter (CBPS)	C07506	+6	0				
Carrier Armored Command Post	C11158	+3	0				
Computer Set, AN/TYQ-107(V)2	C18209	+23	0				
Computer Set, AN/TYQ-107(V)1	C18277	+145	0				
Computer Set, AN/TYQ-106(V)1	C18345	+107	0				
Computer Set, AN/UYK-128	C18378	+374	0				
Computer Set, OL-582/TYQ	C18446	+3	0				
Computer Set, OL-583/TYQ	C18514	+16	0				
Computer Set, OL-584/TYQ	C18582	+1	0				
Computer Set, OL-591/TYQ	C18718	+4	0				
Computer Sys, AN/TYQ-105(V)1	C27503	+100	0				
Computer System, AN/TYQ-108	C27639	+1	0				
Computer Set, OL-590/TYQ	C28078	+5	0				
Battle Command Sustainment Support System (BCS3)	C56827	+16	0				
Command Launch Unit, Javelin	C60750	+93	0				
Computer Sys, AN/UYQ-90(V)3	C78851	+2	0				
Comm Control Set, AN/TSQ-182	C90531	+4	0				
Comm Control Set, AN/TSQ-184A	C90735	+2	0				
Topographic Sys, AN/TYQ-67	D10281	+2	0				
Topographic Spt Sys, AN/TYQ-71	D11498	+1	0				
Forward Area Refueling System	F42611	+21	0				
Crane, Truck-mtd, 25-ton (CCE)	F43429	+11	0				
Bradley Fire Spt Team Veh, M7	F86571	+8	0				
Gen Set, 5kW, MEP-802A TQG	G11966	+3	+193				
Gen Set, 15kW, MEP-804 TQG	G12170	+5	+50				
Gen Set, 60kW, MEP-816 TQG	G18052	+1	+1,030				
Gen Set, 3kW, MEP-831A TQG	G18358	+11	0				
Gen Set, 30kW, PU-803/B/G	G35851	+1	0				
Gen Set, 5kW, PU-797 TQG	G42238	+87	+228				
Gen Set, 10kW, MEP-803A TQG	G74711	+4	+248				

ARNG Table 6

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Gen Set, 10kW, MEP-813A TQG	G74779	+8	+1,000				
Gen Set, 60kW, PU-805 TQG	G78306	+12	+30				
Gen Set, 15kW, PU-801/A TQG	G78374	+28	0				
Gun Laying & Position Sys	G97730	+3	0				
Helicopter, CH-47D	H30517	+14	0				
Helicopter, UH-1V	H31872	+1	0				
Helicopter, UH-60L	H32361	+33	0				
Helicopter, AH-64D	H48918	+14	0				
Howitzer, Towed, 105mm, M119	H57505	+7	0				
Integrated Meteorological System Light, AN/GMQ-36	J41800	+7	0				
Interface Unit, Communication Equip, AN/TYQ-XX (CAISI)	J46526	+4	0				
Integrated System Control, AN/TYQ-76B(V)1	J92107	+2	0				
Machine Gun, 5.56mm, M249	M09009	+110	0				
Mask, Chemical Biological, M40	M12418	+1,148	0				
Mask, Protective, Cbt Veh, M42	M18526	+5	0				
Machine Gun, 5.56mm, M249, Lt	M39263	+3	0				
Laser IR Obs Set, AN/PVS-6	M74849	+311	0				
Night-vision Device, AN/PVS-14	M79678	+8,140	0				
Machine Gun, Grenade, MK19	M92362	+3	0				
Machine Gun, 7.62mm, M240B	M92841	+814	0				
Night-vision Goggles, AN/PVS-5	N04456	+89	0				
Night-vision Sight, AN/TVS-5	N04596	+887	0				
Night-vision Sight, AN/PVS-4 w/Img	N04732	+9	0				
Night-vision Sight, AN/UAS-11	N05050	+18	0				
Night-vision Goggles, AN/PVS-7B	N05482	+6,389	0				
Navigation Set, Satellite Signals AN/PSN-13	N96248	+3,385	0				
Power Plant, AN/MJQ-40 TQG	P42126	+38	0				
Power Plant, AN/MJQ-41 TQG	P42194	+4	+22				
Power Unit Auxiliary, Aviation	P44627	+10	0				
Ramp Bay Bridge Floating	R10527	+2	0				
Radar Set, AN/TPQ-36(V)8	R14284	+3	0				
Radio Set, AN/VRC-89A	R44863	+6	0				
Radio Set, AN/VRC-89F(C)	R44999	+1	0				
Radio Set, AN/VRC-92A	R45407	+2	0				
Radio Set, AN/VRC-92F(C)	R45543	+162	0				
Recovery Vehicle, M88A1	R50681	+2	0				
Radio Set, AN/VRC-87F(C)	R67296	+33	+200				
Radio Set, AN/VRC-88F(C)	R67330	+4	0				

ARNG   Table 6

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Radio Set, AN/VRC-90A	R67908	+8	0				
Radio Set, AN/VRC-91A	R68010	+8	0				
Radio Set, AN/VRC-90F(C)	R68044	+18	+100				
Radio Set, AN/VRC 91F(C)	R68146	+366	+200				
Radio Set, AN/PRC-112	R82903	+644	0				
Radio Set, AN/VRC-119A	R83005	+16	0				
Radio Set, AN/PRC-119F(C)	R83141	+2,128	+200				
Rifle, 5.56mm, M16A2	R95035	+550	0				
Carbine, 5.56mm, M4	R97234	+9,748	0				
Roller Pneumatic, SP (CCE)	S11793	+1	0				
Roller Vibratory, SP (CCE)	S12916	+2	0				
Fire Support Vehicle, Knight, M707	S50205	+1	0				
Scraper Earth Moving SP	S56246	+23	0				
Thermal Wpn Sight, AN/PAS-13B	S60356	+253	0				
Semitrailer, 22.5-ton, M871	S70027	+60	0				
Semitrailer, 34-ton Flatbed, M872	S70159	+100	+299				
Semitrailer Supply Van, M129	S75175	+1	0				
HMMWV Shelter Carrier, M1097	T07679	+9	0				
Target Acq Sys, ITAS M41	T24690	+40	0				
Target Acq Subsys, AN/TSQ-179	T37036	+3	0				
HEMTT Cargo, M985	T39586	+4	0				
MTV 5-ton Cargo Truck, M1084	T41203	+65	0				
LMTV 2.5-ton Cargo Truck, M1081 W/W LAPES/AD	T42063	+1	0				
Forklift, DED 50k lb, RT, Cont Hdlr	T48941	+1	0				
Forklift, DED 6k lb, RT, Ammo Hdlg	T48944	+1	0				
HEMTT Fuel Tanker, M978 W/W	T58161	+2	0				
LMTV 2.5-ton Cargo Truck, M1078	T60081	+3	0				
MTV 5-ton Cargo Truck, M1085	T61704	+7	0				
Forklift, ATLAS	T73347	+1	0				
Radio Test Set, AN/USM-626(V)2	T89384	+4	0				
HMMWV, Up-armored, M1114	T92446	+2,070	0				
Test Facility Shop, AN/TSM-191(V)5	T93211	+3	0				
PLS Trailer, 16.5-ton, M1076	T93761	+3	0				
MTV 5-ton Wrecker, M1089	T94709	+17	+30				
Trailer, Cargo, LMTV, M1082	T96564	+39	0				
Tractor, FT, Cat D7 w/Scarif	W76816	+2	0				
Tractor, FT, Cat D7 w/Scarif	W83529	+2	0				
M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	+2	0				

Table 6

ARNG
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 P-1R Equipment							
Modification of Aircraft							
CH-47 Cargo Helicopter Mods				$108,032,000	$198,032,000		
Utility/Cargo Airplane Mods				7,123,000	7,123,000		
Airborne Avionics				8,726,000	8,726,000		
Global Air Traffic Management (GATM) Rollup				3,586,000	3,586,000		
Support Equipment and Facilities							
Air Traffic Control				12,659,000	12,659,000		
Missiles							
Javelin (AAWS-M) System Summary				41,714,000	41,714,000		
High Mobility Artillery Rocket System (HIMARS)				90,374,000	90,374,000		
ITAS/TOW Mods				83,129,000	83,129,000		
HIMARS Modifications				3,667,000	3,667,000		
Spares and Repair Parts				5,902,000	5,902,000		
Tracked Combat Vehicles							
Bradley Base Sustainment				128,344,000	128,344,000		
Stryker Vehicle				218,712,000	218,712,000		
Carrier, Modification				6,220,000	45,514,000		
M1 Abrams Tank, Modification				0	100,000,000		
Weapons and Other Combat Vehicles							
Howitzer, Light, Towed, 105mm, M119				20,369,000	20,287,000		
M240 Medium Machine Gun (7.62mm)				10,000,000	10,000,000		
M249 Saw Machine Gun (5.56mm)				15,000,000	14,967,000		
MK-19 Grenade Machine Gun (40mm)				0	5,240,000		
Howitzer Lt Wt 155mm, Towed				25,200,000	25,200,000		
MK-19 Grenade Machine Gun Modifications				46,000	46,000		
M249 Saw Machine Gun Mods				77,000	77,000		
Tactical and Support Vehicles							
Tactical Trailers/Dolly Sets				954,000	39,620,000		
Semitrailers, Flatbed:				697,000	29,626,000		
Semitrailers, Tankers				5,563,000	13,516,000		
High Mobility Multipurpose Wheeled Vehicle (HMMWV)				79,612,000	532,097,000		
Family of Medium Tactical Vehicles (FMTV)				144,442,000	592,703,000		
Firetrucks & Associated Firefighting Equip				24,527,000	24,527,000		
Family of Heavy Tactical Vehicles (FHTV)				123,946,000	681,538,000		
Truck, Tractor, Line Haul, M915/M916				10,138,000	61,978,000		
Heavy Expanded Mobile Tactical Truck (HEMTT) ESP				25,040,000	25,040,000		
Towing Device - Fifth Wheel				0	174,000		
Communications and Electronics Equipment							
NAVSTAR Global Positioning System (Space)				10,021,000	10,021,000		
Army Global Cmd & Control Sys (AGCCS)				3,064,000	3,064,000		

Table 6

ARNG
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
SINCGARS Family				86,900,000	86,900,000		
Bridge To Future Networks				65,760,000	65,760,000		
Communications - Electronics Equipment Fielding				1,042,000	5,802,000		
Combat Survivor Evader Locator (CSEL)				0	8,270,000		
Radio, Improved HF Family				90,200,000	96,075,000		
Medical Communications for Combat Casualty Care (MC4)				524,000	524,000		
Telecomm Security (TSEC) - Army Key Mgt System (AKMS)				9,392,000	9,392,000		
Information Systems Security Program (ISSP)				8,435,000	8,517,000		
Prophet Ground (MIP)				16,046,000	16,046,000		
Tactical Unmanned Aerial System (TUAS) MIP				0	34,036,000		
Digital Topographic Spt Sys (DTSS) (MIP)				10,944,000	10,944,000		
DCGS-A (MIP)				6,015,000	6,015,000		
Night Vision Devices				89,649,000	169,136,000		
Long Range Advanced Scout Surveillance System				81,751,000	81,751,000		
Night Vision, Thermal Weapon Sight				50,000,000	50,000,000		
Radiation Monitoring Systems				3,693,000	0		
Force XXI Battle Command Brigade & Below (FBCB2)				11,014,000	11,014,000		
Lightweight Laser Designator/Rangefinder				23,340,000	23,340,000		
Mortar Fire Control System				12,392,000	12,392,000		
Tactical Operations Centers				1,402,000	1,402,000		
Fire Support Command & Control Family				0	2,762,000		
Light Weight Technical Fire Direction System				959,000	0		
Battle Command Sustainment Support System				1,434,000	1,434,000		
FAAD C2				7,558,000	7,558,000		
Forward Entry Device / Lightweight Fed				1,803,000	0		
Knight Family				10,000,000	10,000,000		
TC AIMS II				0	4,000		
Joint Network Management System (JNMS)				877,000	877,000		
Maneuver Control System (MCS)				4,380,000	4,380,000		
Items Under $5M - Electronics Equipment - Support				7,940,000	7,940,000		
Other Support Equipment							
CBRN Soldier Protection				24,868,000	33,601,000		
Tactical Bridge, Float-Ribbon				56,002,000	111,580,000		
Handheld Standoff Mine Detection System (HSTAMIDS)				14,936,000	14,936,000		
Ground Standoff Minefield Detection System (GSTAMIDS)				37,906,000	37,315,000		
Heaters and Environmental Control Units (ECUs)				79,000	79,000		
Soldier Enhancement				3,758,000	3,758,000		
Field Feeding Equipment				20,321,000	21,350,000		
Items Less Than $5M (Engineer Support)				7,000	7,000		
Quality Surveillance Equipment				637,000	637,000		
Distribution Systems, Petroleum & Water				3,032,000	3,784,000		

Table 6

ARNG
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Water Purification Systems				0	353,000		
Combat Support Medical				715,000	2,028,000		
Mobile Maintenance Systems				0	48,792,000		
Grader, Road Mtzd, Hvy, 6X4 (CCE)				0	1,600,000		
Shop Equipment Contact Maintenance Truck-mounted (MYP)				29,561,000	0		
Welding Shop, Trailer Mtd				1,675,000	0		
Mission Modules - Engineering				7,700,000	7,700,000		
Loaders				6,106,000	6,106,000		
High Mobility Engineer Excavator (HMEE)				9,159,000	9,159,000		
Construction Equipment ESP				4,136,000	4,136,000		
Items Less Than $5M (Const Equip)				4,333,000	833,000		
Generators and Associated Equipment				45,913,000	0		
Rough Terrain Container Handler (RTCH)				0	50,000,000		
All Terrain Lifting Army System (ATLAS)				2,810,000	26,330,000		
Integrated Family of Test Equipment (IFTE)				21,591,000	22,581,000		
FY 2008 Title III NGREA Equipment							
Army Battle Command System (ABCS) Equipment						$7,955,575	$147,742,559
HMMWV, Up-armored (M1151A1B1, M1152A1, M1165A1)						72,243,780	72,243,780
Helicopter Utility: UH-60A to UH-60L Upgrade Kit						71,400,000	71,400,000
Heavy Expanded Mobility Tactical Truck (HEMTT)						51,159,375	51,159,375
Semitrailer Flatbed: Breakbulk/Container						22,425,038	22,500,000
Tactical Quiet Generator (TQG)						20,374,234	20,388,750
CH-47F Transportable Flight Proficiency Simulator (TFPS)						17,100,000	17,100,000
XCTC - Flextrain						14,625,000	14,625,000
Integrated Health Management System (IHMS)						14,342,000	14,342,000
SINCGARS Radios						14,000,000	14,000,000
Loader Skid Steer: Type II Track Hvy Ded						11,466,000	11,466,000
Joint Svc Transportable Decon Sys-small Scale (JSTDS-SS)						10,836,000	10,836,000
LUH-72A Mission Equipment Package						10,500,000	10,500,000
Tank, Water Camel 800 gal, 5-ton						10,000,000	10,000,000
Powered Air Purifying Respirator Suit (PAPRS) w/Hydration Capability						9,901,500	9,901,500
Firewall, Router, Fiber Switch, Intrusion Protection Sys, Cabinet, Thin Client, Monitor							9,900,000
Semitrailer Low Bed: 40-ton 6-wheel W/E (HET)						9,700,000	9,700,000
Tactical Unmanned Aircraft System (TUAS) Simulator						9,252,000	9,252,000
Laser Marksmanship Trainer (LMTS)						8,370,000	8,370,000
Drivers Enhancers: AN/VAS-5						7,663,950	7,663,950
Sight: Thermal AN/PAS-13						7,036,400	7,036,400
Trailer Cargo: Light Tactical 3/4-ton						6,722,000	6,722,000
XTS 5000 Radios for CST Upgrades & CERFP Shortages							6,645,000
Loader Skid Steer: Type III Track Over Wheel Light Abn/Ambl						6,615,000	6,615,000
Radio Set: AN/PSC-5						5,400,000	5,400,000

Table 6

ARNG
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
BCT Joint Node Network (JNN), WIN-T Inc 1						5,100,000	5,100,000
Water Purifier: Lightweight						5,011,860	5,011,860
Thermal Sight, AN/PAS-13B(V)1						5,004,800	5,004,800
Continuity of Operations Plan (COOP) - Storage Area Network						5,000,000	5,000,000
Excavator: Hydraulic (HYEX) Type I						2,400,000	2,400,000
Ventilator Volume Portable						2,080,000	2,080,000
TDFM-6148 Radio						1,525,000	1,525,000
Defibrillator Monitor Recorder: 120/230v 50/60Hz						1,398,400	1,398,400
Illuminator: Infrared AN/PEC-15						1,350,000	1,350,000
CERFP Radiation Detection Device, AN/PDR-77						940,670	944,985
Mask Upgrade						818,209	818,209
Tabletop Trainers (TGT, TFT, TMT)						800,250	800,250
Laser Shot						800,000	800,000
Guardian Defender (CST Radiation Detection Equip)						650,000	650,000
Combat Arms Training System (CATS) for ARNG						522,000	522,000
X-ray Apparatus: Low Capacity Port						317,680	317,680
X-ray: Apparatus Den						273,428	273,428
Cyberlux Brighteye Light Set						183,330	183,330
Level B Suits for CERFP & CST Upgrades							176,120
FY 2008 Title IX NGREA Equipment							
Family of Heavy Tactical Vehicles (FHTV)							117,579,000
Field Feeding System							76,805,486
Family of Medium Tactical Vehicles							67,600,000
HMMWV							49,050,000
Tactical Radios							42,037,000
Aviation Health Maintenance Systems							33,003,138
AH-64 A-D Mods (incl. Long-lead Items)							30,750,000
Horizontal Construction Equipment							27,855,000
Light Utility Helicopter - Mission Equipment Package							26,400,000
Tactical Trailers							24,788,000
JFHQ, C4ISR							24,340,000
Chemical Decontamination							17,494,000
Automated Test Equipment							17,068,000
Liquid Logistics Storage/Distro Systems							16,850,000
Training Devices							16,774,000
Military Satellite Communications (MILSATCOM), Phoenix							14,463,000
Night Vision							14,044,000
Tactical Command and Control Systems (incl. ABCS)							12,375,000
Digital Enabler (incl. Vehicle Movement Tracking Systems)							8,400,000
Small Arms							8,004,000
Medical Systems							5,797,000

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Generators							2,968,000
Route & Area Clearance (incl. Boats)							1,818,000
Avionics							1,505,000
Total				**$2,115,579,000**	**$4,176,139,000**	**$453,263,479**	**$1,267,633,000**

Table 7

ARNG
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 2011 Qty	Deployable? Yes	Deployable? No
Aircraft						
Helicopter, Observation, OH-58C	H31110	Helicopter, Observation, OH-58A	K31042	107	X	
Helicopter, Utility, UH-60L	H32361	Helicopter, Utility, UH-60A	K32293	282	X	
Battle Command and Control						
Computer System, AN/TYQ-109(V)2	C27775	Computer System, AN/TYQ-109(V)1	C27707	1,319	X	
Gen Set, 10kW, PU-798 TQG	G42170	Gen Set, 10kW, PU-753/M	G40744	161	X	
Gen Set, 5kW, PU-797 TQG	G42238	Gen Set, 5kW, PU-751/M	G37273	85	X	
Gen Set, 10kW, MEP-803A TQG	G74711	Gen Set, 10kW, MEP-003A	J35825	369	X	
Gen Set, 3kW, MEP-831A TQG	G18358	Gen Set, 5kW, MEP-002A	J35813	579	X	
Gen Set, 5kW, MEP-802A TQG	G11966	Gen Set, 5kW, MEP-002A	J35813	531	X	
Gen Set, 15kW, PU-802 TQG	G53778	Gen Set, 15kW, PU-405	J35492	292	X	
Gen Set, 15kW, PU-802 TQG	G53778	Gen Set, 30kW, PU-406	J36383	115	X	
Gen Set, 30kW, PU-803/B/G	G35851	Gen Set, 30kW, PU-406	J36383	139	X	
Gen Set, 60kW, PU-805 TQG	G78306	Gen Set, 60kW, PU-650	J35629	36	X	
Power Plant, 10kW, AN/MJQ-37 TQG	P42262	Power Plant, 10kW, AN/MJQ-18	P28015	15	X	
Power Plant, 30kW, AN/MJQ-40 TQG	P42126	Power Plant, 30kW, AN/MJQ-10	P27819	11	X	
Nav Set, AN/PSN-13	N96248	Nav Set, AN/PSN-11(V)1	N95862	8,634	X	
Battlespace Awareness						
Central Communications, AN/TSQ-190(V)3	C89935	Trojan Spirit Lite, AN/TSQ-226(V)3	C43399	7	X	
Battle Command Transport						
Radio, AN/PRC-119F(C)	R83141	Radio, AN/PRC-119D	R83073	286	X	
Radio, AN/PRC-119F(C)	R83141	Radio, AN/VRC-119A	R83005	1,274		X
Radio, AN/VRC-87F(C)	R67296	Radio, AN/VRC-87A	R67160	129		X
Radio, AN/VRC-87F(C)	R67296	Radio, AN/VRC-87C	R00845	2	X	
Radio, AN/VRC-87F(C)	R67296	Radio, AN/VRC-87D	R67228	66	X	
Radio, AN/VRC-88F(C)	R67330	Radio, AN/VRC-88D	R67262	158	X	
Radio, AN/VRC-88F(C)	R67330	Radio, AN/VRC-88A	R67194	898		X
Radio, AN/VRC-89F(C)	R44999	Radio, AN/VRC-89A	R44863	1,144		X
Radio, AN/VRC-89F(C)	R44999	Radio, AN/VRC-89D	R44931	323	X	
Radio, AN/VRC-90F(C)	R68044	Radio, AN/VRC-90D	R67976	2,215	X	
Radio, AN/VRC-90F(C)	R68044	Radio, AN/VRC-90A	R67908	7,769		X
Radio, AN/VRC 91F(C)	R68146	Radio, AN/VRC-91A	R68010	3,432		X
Radio, AN/VRC 91F(C)	R68146	Radio, AN/VRC-91D	R68078	801	X	
Radio, AN/VRC-92F(C)	R45543	Radio, AN/VRC-92A	R45407	1,339		X
Radio, AN/VRC-92F(C)	R45543	Radio, AN/VRC-92D	R45475	656	X	
Combat Mobility						

Table 7

ARNG
Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2011 Qty	Deployable?	
					Yes	No
Tractor, Full-tracked, Armored, M9 (ACE)	W76473	Tractor, FT, Med, Cat D7 w/Scarif Winch	W76816	11	X	
Tractor, Whld Excavator, SEE	T34437	M939/M809 Series 5-ton, M934A1P1/A2P1	W91074	5	X	
Field Logistics						
Test Set, AN/PSM-95	T92889	Test Set, AN/PSM-80(V)2	T77499	6	X	
Test Set, AN/APM-305	V99436	Test Set, AN/APM-123	V99347	1	X	
Test Set, AN/APM-305	V99436	Test Set, AN/APM-239A	V99416	5	X	
Forklift, ATLAS	T73347	Forklift, Rough Terrain	T49119	35	X	
Forklift, ATLAS	T73347	Forklift, Rough Terrain	X48914	9	X	
Forklift, ATLAS	T73347	Forklift, RT, Ammo Hdlg	T48944	147	X	
Forklift, ATLAS	T73347	Forklift, Rough Terrain	X49051	2	X	
Kitchen, Containerized, CK	C27633	Kitchen Field, Trlr-mtd	L28351	147	X	
Tactical Water Purification System (TWPS), 1500 GPH	T14017	Water Purif Equip Set: Reverse Osmosis 600 GPH	W35417	4	X	
Force Protection						
Chemical Agent Alarm, M22	A33020	Chemical Agent Alarm, M8A1	A32355	6,585	X	
Decontaminating Apparatus, M17	D82404	Decon Apparatus, M12A1	F81880	48	X	
Radiac Set, AN/UDR-13	R31061	Radiacmeter: IM-93/UD	Q20935	2,568	X	
General Engineering						
Tractor, FT, Med, Cat D7 w/Scarif Ripper	W83529	Tractor, FT, Hvy, CAT D8K-8-S	W88699	7	X	
Tractor, FT, Med, Cat D7 w/Scarif Ripper	W83529	Tractor, FT, Med, Cat D7 w/Scarif Winch	W76816	40	X	
Manuver Combat Vehicles						
Carrier Armd Command Post	C11158	Carrier, Command Post, M577A1	D11538	200	X	
Bradley, Infantry, M2A3	F60564	Bradley, Infantry, M2A2	F40375	2	X	
Tank, Combat, 120mm Gun, M1A2	T13305	Tank, Combat, 120mm, M1A1	T13168	4	X	
Soldier Systems						
Night-vision Goggles, AN/PVS-7B	N05482	Night-vision Goggles, AN/PVS-5	N04456	9,151		X
Night-vision Goggles, AN/PVS-7B	N05482	Night-vision Device, AN/PVS-14	M79678	81,568	X	
Thermal Sight, AN/PAS-13B(V)1	S60356	Night-Vision Sight, AN/PVS-4	N04732	795	X	
Soldier Weapons						
Carbine, 5.56mm, M4	R97234	Rifle, 5.56mm, M16A2	R95035	9,040	X	
Carbine, 5.56mm, M4	R97234	Rifle, 5.56mm M16A4	R97175	2,281	X	
Machine Gun, 5.56mm, M249 LT	M39263	Machine Gun, 5.56mm, M249	M09009	1,879	X	
Strike						
Laser Designator Rangefinder, AN/PED-1	R60282	Target Designator Set: Electro Optical (GLLD)	T26457	139	X	
Bradley, M7	F86571	APC, FISTV, M113	C12155	31	X	
Howitzer, 105mm, M119	H57505	Howitzer, 105mm, M102	K57392	32	X	
Trailers						
Semitrailer Van, 6-ton, Electr Shop, M146	S75038	Semitrailer Van, 12-ton, Supply, M129	S75175	63	X	
Trailer, 3/4-ton, M1101	T95992	Trailer, 3/4-ton, M101	W95537	1,299	X	

Table 7

ARNG
Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2011 Qty	Deployable?	
					Yes	No
Trucks						
HMMWV, M998	T61494	HMMWV, M1097-Series	T07679	5,082	X	
HMMWV, M998	T61494	HMMWV, M1038 W/W	T61562	433	X	
HMMWV, M1113	T61630	HMMWV, M1097-Series	T07679	666	X	
HEMTT, M985 W/W	T39654	HEMTT, M985-Series WO/W	T39586	246	X	
HEMTT, M977 W/W	T39518	HEMTT, M985-Series WO/W	T39586	94	X	
HEMTT, M977 W/W	T39518	HEMTT, M977 WO/W	T59278	48	X	
HEMTT Fuel Tanker, M978	T87243	Tank & Pump Unit, Trk-mtd	V12141	27	X	
LMTV 2.5-ton Cargo Truck, M1078	T60081	M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	1,557	X	
LMTV 2.5-ton Cargo Truck, M1078	T60081	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	293		X
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	73		X
MTV 5-ton Cargo Truck, M1083	T61908	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	252		X
MTV 5-ton Cargo Truck, M1083	T61908	M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	1,649	X	
MTV 5-ton Cargo Truck, M1083 W/W	T41135	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	265		X
MTV 5-ton Cargo Truck, M1083 W/W	T41135	M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	147	X	
MTV 5-ton Cargo Truck, M1085	T61704	M809/M939-series 5-ton Cargo Truck, M814/M928 W/W	X41242	11	X	
MTV 5-ton Cargo Truck, M1085	T61704	M809/M939-series 5-ton Cargo Truck, M814/M927	X41105	38	X	
MTV 5-ton Tractor Truck, M1088	T61239	Truck Tractor, M939/M809 Series 5-ton, M931/M818	X59326	1,164	X	
MTV 5-ton Tractor Truck, M1088	T61239	Truck Tractor, M939/M809 Series 5-ton, M932/M818 WW	X59463	73	X	
MTV 5-ton Tractor Truck, M1088 W/W	T61307	Truck Tractor, M939/M809 Series 5-ton, M932/M818 WW	X59463	66	X	
MTV 5-ton Cargo Truck, w/ LAPES/AD, M1093	T41036	M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	19	X	
MTV 5-ton Cargo Truck, w/ LAPES/AD,M1093 W/W	T41104	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	5		X
PLS Transporter, M1075	T40999	PLS Transporter, M1074	T41067	195	X	

Table 8

ARNG
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	Command Posts - Tactical Operations Center (TOC) & Standardized Integrated Command Post System (SICPS)	49,230	30,442	$38,300	$1,165,742,462	Integrated command posts with Force XXI Battle Command, Brigade & Below (FBCB2) continue to represent a critical shortfall for the ARNG.
2	Family of Medium Tactical Vehicles (FMTV)	33,291	5,428	$280,000	$1,518,898,993	The FMTV Trucks are replacement vehicles for existing non-deployable M35 series and 800/900 series 2.5 and 5 ton trucks still resident within the ARNG fleet.
3	Shadow Tactical Unmanned Aircraft System (TUAS)	40	11	$27,000,000	$297,000,000	TUAS equipment sets and their associated Shadow Crew Trainers are critically required high-value ISR assets for support of war-fight missions across the full spectrum, as well as for homeland emergency support to civil authorities.
4	General Engineering Equipment	10,483	3,614	$101,463	$366,687,708	Horizontal/Vertical construction, diving, and firefighting equipment critically underfilled. Required for homeland defense response missions.
5	Chemical/Biological Protective Shelter	291	290	$720,000	$208,800,000	CBRNE collective protective systems required for CCMRF missions.
6	Tactical Trailers	27,672	6,675	$30,000	$200,169,674	Light, Medium, and Heavy Tactical Trailers are required to transport miscellaneous cargo in support of all mission assignments (HS/HD, OCO, etc.)
7	Field Logistics	2,764	1,343	$105,000	$130,354,897	This category includes many CDU items that transport, chill, and store bulk water as well as other systems that prepare food, all in field conditions.
8	Tactical Power	23,802	4,998	$24,347	$121,685,714	Modernize power-generation requirements to support OCO and HS/HD missions.
9	Light Utility Helicopter (LUH) Mission Equipment Package (MEP)	100	57	$1,660,000	$71,380,000	LUH-72A MEP encompasses HD/DSCA/HS mission support objectives of Modernization & Force Structure Transformation aligning with AC.

Table 8

ARNG
Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
10	Medical Field Systems	15,092	2,249	$5,000	$10,992,060	This category includes all of our MC4 LINs that integrate, field and support a comprehensive information system enabling lifelong electronic medical records, streamline medical logistics and enhanced situational awareness for Army tactical forces.

III. Army Reserve Overview

A. Current Status of the Army Reserve

1. General Operational Overview

In April 2010, the Army Reserve celebrated 102 years of service at home and abroad. The Army Reserve is a community-based force comprised of 207,196 Warrior-Citizens who live and work in thousands of communities across the country. They are the teachers, coaches, police officers, business leaders, college students, neighbors, and friends in your community who bring their civilian skills to the Army Reserve. They provide complementary capabilities for all missions and domestic operations.

Today, more than 28,000 Army Reserve Soldiers (14 percent of our force structure) are deployed in Iraq, Afghanistan, and 22 other countries. An additional, 7,000 Army Reserve Soldiers are mobilized and serving in the United States. Since September 11, 2001, more than 192,000 Army Reserve Soldiers have either mobilized or deployed in support of OCO and in defense of our nation. As the force enters into its 102nd year and celebrates its proud history, the Army Reserve is asking more of its Soldiers and families. A more than century-old commitment to readiness is driving how today's Army Reserve trains, supports, and retains its Warrior-Citizens.

To effectively meet the demands in support of an operational force to provide the global war-fighting capacity and ability to respond to HD/DSCA related operations, the Army Reserve must be fully manned, trained, and equipped. As an integral part of the Army's team, the Army Reserve units and Soldiers require the most modern and capable equipment available to improve our units' overall readiness posture and enable system interoperability and integration with our AC counterpart.

Top Army Reserve Equipping Challenges

- Equip Army Reserve formations to optimal operational levels for full-spectrum operations

- Increase equipment modernization in an era of decreasing resources

- Increase facility and manpower capabilities to sustain modernized and emerging equipment

- Modernize the Army Reserve Tactical Wheeled Vehicle (TWV) fleet

- Resourcing for logistics automation technology required refresh

- Gain full transparency for equipment procurement through unit level receipt

a. Status of Forces as an Operational Reserve

In FY 2010, the Army Reserve finalized its force structure modular conversion of medical, civil affairs, logistics support, military police, engineering, and route clearance units. This conversion facilitated the Army Reserve's transition from a strategic reserve to an operational reserve, capable of providing combatant commanders and national response authorities with a responsive mission-tailored modular force. The operational reserve is a force organized and resourced to provide trained, predictable forces to the combatant commander across full-spectrum operations. As such, in FY 2010 the Army Reserve responded to several OCONUS emergencies and events, deploying Soldiers and equipment to support aid efforts for the American Samoa tsunami (September 2009), Fort Buchanan explosion (October 2009), and Haiti earthquake (January 2010).

b. Homeland Defense and Defense Support of Civil Authorities

The Army Reserve is the nation's first Title 10 responder for DSCA. With a presence in 1,200 communities across the nation, it is a logistical force with units resourced with the required equipment capability and Soldiers trained with the critical skills to meet HD/DSCA operations. This force includes 36 percent of the Army's chemical structure; 89 percent of the civil affairs structure; 31 percent of the engineer structure; 33 percent of the interpreter/translator structure; 45 percent of the medical structure; 25 percent of the military police structure; 53 percent of the quartermaster structure; 45 percent of the transportation structure; and 10 percent of the signal structure.

Trained to respond to two near simultaneous catastrophic events involving the use of weapons of mass destruction or a terrorist event, the Army Reserve contributes to the CBRN Response Enterprise with a myriad of capabilities that include Theater Aviation Command, Medical Brigades and Hospitals, Mortuary Affairs detachments, Consequence Management units, Movement Controls detachments, Fire Fighting units, and Chemical and Biological Detection units. These provide federalized military assistance to a lead federal agency in the event of a CBRNE attack to our nation.

Units sourced to support CCMRF missions do so for three years: one year training and two operational years. During the training year, units participate in tactical level exercises evaluated by U.S. Army North personnel. Headquarter units, battalion-size and larger, participate in NORTHCOM-sponsored Command Post Exercises. During the operational years, all Army Reserve CCMRF units participate in one annual field training exercise (14-day duration), which revalidates the unit for the subsequent operational year.

The primary purpose of the equipment assigned to these units is to support the full-spectrum operations; however, the equipment falls under the category of CDU. Army Regulation 220-1 (Army Unit Status Reporting and Force Registration – Consolidated Policies) defines CDU equipment items as those equipment items that support both the operational requirements of Army units and that are necessary to enable Army units and personnel to assist civil authorities in responses to natural disasters, acts of terrorism, and other manmade disasters as identified in national planning scenarios; i.e., in support of HD/DSCA. The Army Reserve has a requirement for 81 percent (297 of 365) of the CDU LINs with 91 percent on-hand with substitutes and 77 percent on-hand without substitutes. When called upon, the Army Reserve generates response forces by first employing on-hand equipment from within the responding organizations' chain of command and only cross-levels outside the organization if the capability resides elsewhere.

In FY 2010, the Army Reserve deployed Soldiers and equipment in support of the following domestic emergencies: Hurricane Ida (November 2009), establishment of two Regional Joint Task Forces for Pandemic Influenza (November 2009), Midwest flooding (March 2010), Northeast flooding (April 2010), Deepwater Horizon oil spill (April 2010), and Hurricane Alex (June 2010).

2. Status of Equipment

a. Equipment On-hand

With 80 percent of its equipment on-hand and only 65 percent of it modernized, the Army Reserve still faces equipping challenges in terms of interoperability and integration of equipment

within the current operational environment. Although, the Army Reserve has successfully met all OCO demands, it currently relies on TPE to complete modernized operational equipment requirements. As we move away from our reliance on TPE, we must strike a balance between our newly procured modernized equipment, Army Reserve depot/rebuild programs, less modernized equipment, and simulators.

To properly meet ARFORGEN equipping aim points and account for equipment friction, the Army Reserve must have 100 percent of required equipment on-hand. As defined in the 2009 Army Equipping Strategy, equipment in friction (about 20 percent of the inventory) is unavailable to fill unit MTOE or TDA authorizations, because it is in transportation or reset.

Currently, equipment shortfalls are mitigated through the use of fleet management; equipment sets; and Training Aids, Devices, Simulators and Simulations (TADSS) as a means to mitigate training risks for ARFORGEN-constrained systems or those systems, such as unmanned aircraft systems, biometrics, electronic warfare, and intelligence systems, which are not procured to the AAO because of costs, production delays, technology shelf-life, etc., and are closely managed and have limited distribution and availability to units except for necessary training and mission requirements. Through these concepts, Army Reserve units have access to sufficient equipment during their training periods, while TPE fills the gaps for deploying units. Shortages of modernized equipment represent a risk in the ability of the Army Reserve to meet all current and future contingencies. *Table 1* provides a comprehensive list of selected major items of equipment based upon the Army Equipping Enterprise System data. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning or end of the specified FY. Table 1 also provides the required quantity (QTY REQ) to meet the full wartime requirements of the Army Reserve at the end of FY 2014.

b. Average Age of Major Items of Equipment

Many of the major end items in the Army Reserve have been received in the past by cascading older items to the Army Reserve as new equipment was fielded to the AC. Thus, many of these items were near or past their planned service life. While this was more suitable for a peacetime strategic reserve, it assumed greater risks in the readiness of the forces and does not support an operational concept. The Army's modernization efforts have significantly improved Army Reserve equipment; however, the Army Reserve continues to have items, such as construction equipment, material handling equipment, and tactical wheeled vehicles that exceed economic useful life and are not programmed to be modernized for many years. These older items increase operational and sustainment costs and result in a decrease in equipment serviceability rates. *Table 2* provides the average age of major items of the fleet at the beginning of FY 2011.

c. Compatibility of Current Equipment with AC

The current use of the TPE compensates for much of the possible compatibility issues of Army Reserve equipment for the current operations. However, future operational demands will not have this "pre-staged" equipment to offset the lack of modernization and compatibility. Significant improvements have been made, and fielding new modernized equipment to the same standard across all components is essential, and will ensure a consistent and predictable operational reserve that is trained and ready to deploy when called upon. *Table 7* provides a list of authorized substitute items currently used by Army Reserve units, and identifies those items

considered as non-deployable in the current operational environment. By definition, substitute items are considered deployable for any unknown contingency and count as "equal to" the modernized item in unit readiness reporting. Failure to replace these older items with their modernized replacement assumes additional risk for the Army Reserve Soldiers that may be called upon for a short notice deployment under another contingency. Likewise, the current practice of not modernizing the MTOE documents to reflect the true requirements makes accurate readiness reporting more of a subjective effort than an objective measure.

d. Maintenance Issues

i. Field Level Maintenance

The Army Reserve continues to meet or exceed the Army readiness standard of 90 percent FMC status for its reportable equipment. All redeployed equipment not inducted into national-level maintenance programs was recovered, repaired, and serviced. In light of acknowledged shortages, this equipment was then immediately transferred to "next deployers" or used to provide critical training to sustain pre-mobilization and pre-deployment training. However, one area of concern is the shortage of maintenance facilities within the Army Reserve, specifically maintenance bays for mechanics to work. This limited space hinders our ability to utilize contract maintenance personnel to fill critical shortfalls. In addition, current facilities within the Army Reserve are unable to support the larger, heavier vehicles of the Army's modernized fleet. As the Army Reserve receives a higher level of fill for modernized equipment, our ability to maintain this equipment adequately will be diminished unless upgraded maintenance facilities keep pace with the Army's modernization efforts.

ii. Sustainment Level Maintenance

The Army Reserve has a significant amount of older equipment; national level maintenance and sustainment programs are a critical part of our readiness. Because our formations are filled with significant quantities of older generation equipment, a means of extending the service life, reducing the operating costs, and improving the safe operation of this equipment is required. One essential program is the HMMWV M998 to M1097R1 recapitalization, where older M998s are rebuilt into M1097R1 models, which are able to carry both their payload and "add-on" armor without a reduction in performance and reliability. We project that M1097R1 models will make up 60 percent of our HMMWV fleet by FY 2016. Depot maintenance programs repair and return Army Reserve equipment to like new conditions with zero miles and zero hours. Sometimes, this includes technology insertions when original equipment manufacturer parts are no longer available. As an example, when our cranes were overhauled, the original mechanical control panel was unavailable and had to be replaced with a digital control panel. These programs repair damaged and failed components and help extend the service life, reduce sustainment costs, and improve safe operation of our aging equipment.

The following initiatives are examples of Army Reserve collaboration with industry to design and implement total rebuild and refurbishment programs:

- 4,000 lb. Rough Terrain Forklifts—Capability is used primarily in supply holding areas and marshaling yards, and used by supply, maintenance, transportation, and engineer units to manage movement of equipment and load/unload containers. There are three models of the 4K forklifts, the oldest of which were manufactured between 1981 and 1983 and already

exceeds its expected 15-year economic useful life (EUL). The other models were manufactured between 1995 and 1996. The total Army Reserve MTOE requirement for these forklifts is 542. Between FY 2002–2009, we rebuilt a total of 459 of the older models and expect to complete this program by FY 2012.

- M923A2 5-ton Cargo Truck—The Army Reserve is authorized 3,115 MTVs with 632 on-hand. These cargo trucks are over 20-years old and are past their EUL. Under the current Army tactical wheeled strategy divestiture time table, the M923A2 trucks will continue to substitute for and fill MVT shortfalls until no later than FY 2022. There have been 272 of this model rebuilt. This rebuild program will continue for several more years.

- M923A2 and M929A2 5-ton Dump Truck—The Army Reserve is authorized 795 of modernized MTV Dump Truck but only has 52 on-hand. To help fill this shortage, the Army Reserve has rebuilt 361 M923A2s and 171 M929A2s. This older fleet is over 20-years old and is past its EUL. The Army Reserve plan is to continue with the program for the next 5 years

- M1062 Semitrailer Tanker 7,500 Gallon—Provides the capability of transporting 7,500 gallons of fuel over general highways and limited unimproved roadways. The Army Reserve has 90 percent of the total Army structure for this capability and is authorized 480 with 337 on-hand. There have been 192 of this model rebuilt.

- M984A1 HEMTT Truck Wrecker—The Army Reserve's FY 2011 authorization is 395, with only 204 of the A1 models on-hand and 55 A2 models (68 percent fill). The Army Reserve's fleet of M984A1s has an average age of 18.2 years. The modernized item is the M984A4, of which the Army Reserve has only 4 on-hand. The Army Reserve has rebuilt 91 in the Army Reserve resourced depot rebuild program and has sent 6 to the Army Reset program, for a total 97 rebuilt/reset systems. The Army Reserve has an ongoing rebuild program with 24 scheduled in FY 2011.

iii. Automatic Reset Induction (ARI)

The Army continues to reset the redeploying Army Reserve equipment through the ARI program at Life Cycle Management Command installations. While the diversion of Army Reserve equipment into the Sustainment Level Reset prior to redeployment has created challenges in tracking the DoDD 1225.6 payback, we anticipate improvements resulting from the traceability and transparency initiative will allow us to track the return of this equipment to the Army Reserve.

e. Overall Equipment On-hand Readiness

The Army Reserve EOH continues to improve. Currently, about 80 percent of the total pieces of authorized equipment are on-hand. While this is improving, of the equipment on-hand, only 65 percent is considered the modernized item, and some critical and low density LINs remain at below 50 percent fill. To fully meet the demands of an operational reserve, the Army Reserve should be equipped to the same standards as its AC counterparts. The current equipment situation poses risk for both the ability to surge in Year 4 of the ARFORGEN cycle as an

operational reserve and the ability to prepare during Year 1 through Year 3 to serve as a strategic reserve.

f. Organizational Clothing and Individual Equipment (OCIE) and the Rapid Fielding Initiative

The Army Reserve transitioned to the Central Issue Facility (CIF) method of issuing OCIE in 2010. Until the transition, all OCIE was requested, stocked, and issued by unit supply rooms and maintained on unit property books. The transition enabled the Army Reserve to issue OCIE on par with the AC. The Army Reserve CIF is located at Sierra Army Depot operated by the Army's Central Management Office-OCIE and distributes the OCIE through the Army's Central Issue Facility-Installation Support Module (CIF-ISM). CIF-ISM places the OCIE on the individual Soldier's personnel record allowing the Soldier to maintain the OCIE, making it readily available for deployment and removing the requirement for units to secure the property. In addition to unit OCIE, the Army Reserve receives updated OCIE for deploying Soldiers and units through the Rapid Fielding Initiative (RFI). The RFI program is a HQDA program that provides theater specific and advanced unit and individual equipment. The Army Reserve receives RFI fieldings at the three Army Reserve pre-mobilization Regional Training Centers, which are located at Fort Hunter Liggett, Fort McCoy, and Fort Dix.

B. Changes Since Last NGRER

1. Transparency

The Army Reserve is working with HQDA to improve current equipment delivery and distribution processes to enable accurate and reliable accountability, transparency, and traceability of equipment distributions. Presently, transparency related processes are manually-intensive processes in which equipment delivery quantities are collected, processed, and officially documented on the Equipment Delivery Report. HQDA G-8, in collaboration with the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA[ALT]) Program Managers, is hard at work to link the Material Inspection and Receiving Report or Department of Defense (DD) 250 with contracts and appropriations to Army Reserve equipment deliveries. Establishment of a systematic and automated process to capture information through HQDA and the ASA(ALT) databases is forthcoming. The use of IUID to link appropriations, contracts, and delivery of Army Reserve equipment is also a vital automated piece in development that will provide transparency and traceability throughout the entire process.

2. Army Reserve Equipping Strategy

The Army Reserve's goal is to have 100 percent of its modernized equipment to ensure that units and Soldiers have the right equipment at the right time and place available for training and mission execution. The Army Reserve's equipping strategy must strike a balance between allocations of equipment through new procurement and modernized cascaded equipment, maintenance and sustainment of on-hand equipment, and the divestiture of obsolete equipment.

Since completing the conversion of the Army Reserve into modular formations, a strategy to meet equipping needs under cyclic readiness was developed. During the Reset phase, the redeployed unit is recovering from deployment and has no readiness expectation, but must be capable of responding to HD/DSCA contingencies. During the Train-Ready phase, the unit is

preparing for deployment by training for full-spectrum operations. The readiness expectation is to have the unit equipped to 80 percent of its MTOE for it to conduct collective training. In the Available phase, the unit is deployed or available for deployment; the readiness expectation is to equip the unit to 90 percent of its MTOE authorizations with the remaining 10 percent provided by theater.

To enable this, the Army Reserve holistically manages its equipment and cross-levels into deploying forces and develops training sets from within. Even though for most quantities of equipment it is imperative that the Army be able to procure to the AAO for ARFORGEN-constrained equipment, the use of fleet management, equipment sets, and TADDS will mitigate limited Army-wide inventory of certain systems, such as the Army Battle Command System (ABCS). Additionally, through the Army Reserve Training Strategy the Army Reserve builds enduring readiness by pulling equipment sets and stationing them at Army Reserve CS/CSS Training Sites. This enables the Army Reserve to effectively synchronize its limited modernized equipping resources with training missions and cyclic equipping readiness requirements. During FY 2010, the procurement of new and modernized equipment for the Army Reserve came primarily through the base budget ($1.5B) and NGREA ($85M).

As the Army's equipping budget decreases in the future, the reliance on maintenance and sustainment programs will increase, making them essential to the viability of the Army Reserve's older systems. The repairs at unit level, depot, and Army's industrial base ensure equipment is kept or brought back to 10/20 standards and is available for training or operational use. The recapitalization of some currently fielded systems provides a means to extend its service life, reduce operating and support costs, enhance capability by adding new technological features, and improve system reliability.

Concomitantly, through detailed fleet management reviews, the Army Reserve has identified and developed a divestiture plan for older and excess systems in its inventory. This process has enabled the Army Reserve to purge obsolete non-deployable systems from its inventory, identify true capability shortages, and in most cases, replace it with the most modern capability available.

3. Equipping Successes

In FY 2010, the Army Reserve received 113,000 items valued at $3.3B. Continued focus by HQDA and the Army Reserve resulted in substantial increases in the EOH status over the past year. Specific accomplishments include: the Armored Security Vehicle, a key piece of equipment used by AR military police, increased its EOH by 120 percent over FY 2009; the Command Post of the Future increased EOH 74 percent over FY 2009; the Forklift Medium Capacity improved 100 percent; the Improved High Frequency Tactical Radio increased EOH 125 percent; the Loader, a critical piece of Engineer equipment, increased 22 percent (123 pieces of equipment); the Light Tactical Trailer, used in all formations of the Army Reserve to transport equipment in support of HS as well as OCO, increased 39 percent or 1,899 trailers over FY 2009; and the Very Small Aperture Terminal, used for satellite communications, increased its EOH by 151 pieces of equipment or 48 percent over last year.

C. Future Years Program (FY 2012–FY 2014)

1. New Equipment Procurements

a. Base Budget

The Army Reserve continues to receive and field equipment each year to fill shortages and modernize as an operational reserve. In FY 2010, the Army allocated approximately $1.5B in base funding for Army Reserve equipment. Highlights include $223M for the FMTV, $173M for Countermines, $116M for HMMWVs, $112M for Palletized Load Systems (PLS), $86M for HEMTTs, $56M for Tactical Bridging, and $52M for Construction Equipment. The FY 2010 base funding provides much needed modernization of Army Reserve equipment; however, tactical vehicle modernization continues to be a challenge. In FY 2011, the Army Reserve anticipates receiving $1.1B in base budget funding, which will continue to modernize Army Reserve equipment and the vehicle fleet.

b. NGREA

NGREA funding is important to support the operational reserve; it helps offset modernization shortages in the Army's new equipment procurement programs. It is an invaluable tool, making resources beyond the President's Budget and supplemental available to the Army Reserve. Although 26 percent of the CS, 41 percent of the CSS, and 84 percent of the civil affairs and psychological operations structure in the Army resides in the Army Reserve, historically, we receive less than 5 percent of the total new equipment procurement budget. Providing NGREA funding to the Army Reserve significantly enhances equipment compatibility and interoperability with the AC through modernization, while drastically improving equipment on-hand readiness percentages for critical equipment systems.

2. Anticipated Transfers from AC to RC

Table 5 reflects equipment transfers from AC to the RC.

3. Anticipated Withdrawals from Army Reserve Inventory

All of the equipment diverted from the Army Reserve prior to 2007 has been paid back, and since 2007, there has been a small amount of equipment diverted from the Army Reserve to support current operations. The most significant withdrawals were 650 PLS Flatracks and 30 Bay Bridge sections. The Army and Army Reserve have agreed on the payback plan, and are currently tracking the actions. The Army Reserve recognizes the need to withdraw equipment to support contingency operations, and it has the full support of HQDA on the payback processing. Of concern is the tracking of the equipment diverted from the Army Reserve units into the Sustainment Level reset, prior to redeployment in theater. While not considered a DoDD 1225.6 action, some equipment is removed from the Army Reserve property books and inducted into the Army Sustainment Level Reset. Currently, we have no positive traceability to ensure the Army Reserve receives like-item replacements for this equipment.

4. Simulators

The Army Reserve uses simulators and simulations to efficiently and effectively meet ARFORGEN training aim point requirements, offset training impacts caused by equipment shortfalls, and mitigate limited access to adequate training areas. Simulators and simulations

provide the ability to familiarize/train with the most recently fielded combat equipment, which is only available in the combat zone; sustain individual Soldier and unit training proficiency; and support institutional training. The Army Reserve synchronizes the use of Live, Virtual, Constructive, and Gaming capabilities (these capabilities are referred to as Training Aids, Devices, Simulators, and Simulations [TADSS]) across the ARFORGEN model. Simulators and simulations afford the Army Reserve opportunities to mitigate costs and training issues associated with the following:

- Equipment life cycle management costs

- Acquisition of high-cost/low-density equipment

- Equipment improvements based on lessons learned

- Emerging technologies

- Equipment operating and sustaining costs

- Operating the equipment in different/extreme environmental conditions.

The Army Reserve is creating regional hubs across the CONUS at Reserve Centers, Battle Command Training Centers, local training areas, and AR-funded installations in densities and types based on unit types in the area to support training ARFORGEN-required skill sets.

5. Equipment Shortages and Modernization Shortfalls

While the Army has made significant improvements in modernizing the Army Reserve, there are still shortages of modernized equipment that are necessary for training to prepare for deployment. Listed below are some of the Army Reserve's top modernization shortages. The Army Reserve has an equipment shortfall of $3.9B, accounting for substitute items.

a. Equipment Capability Categories

The Army Reserve equipment inventory includes nine Equipment Capability categories. They are as follows.

i. Aviation

With six percent of the Army's aviation force structure, the Army Reserve has a current requirement of 386 fixed and rotary-wing airframes. Of those, the Army Reserve has 310 or 80 percent on-hand (this is a mixed fleet of new production aircraft and older cascaded aircraft). The Army Reserve is projected to have all 40 of its UH-60 Blackhawks by the end of FY 2012 with the exception of a shortfall of 6 HH-60L MEDEVAC Helicopters (3 HH-60Ls are being transferred from the AC and are expected to arrive December 2010), all 48 of its AH-64 Apaches and all 24 CH-47 Chinooks by the end of FY 2012. Requirements for several airframes decrease through 2017. Assuming funding in the current FYDP is executed as planned, the Army Reserve fleet will approach 100 percent of its aircraft requirement by FY 2015. However, funding issues remain for two modernization initiatives, AH-64A to D conversions and UH-60L to M conversions.

ii. Battle Command Systems

Battle Command Systems includes multiple systems and subsystems. Based on FY 2012 requirements, EOH, and planned deliveries, Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T) has a requirement for 20 with zero on-hand. The Army Reserve had two systems that were directed to be turned-in for upgrade and then should be reissued back to the Army Reserve as the Advanced Extremely High Frequency SMART-T. Simple Key Loaders will have 13,325 out of 28,584 systems required. WIN-T has a requirement of 24 systems with an on-hand quantity of 16 systems.

The major components of the ABCS concerning the Army Reserve are: Standardized Integrated Command Post System (SICPS), Tactical Battle Command, Force (TBC), XXI Battle Command Brigade and Below (FBCB2), Battle Command Sustainment Support System (BCS3), Digital Topographic Support System (DTSS), Advanced Field Artillery Tactical Data System (AFATDS), and Integrated System Control (ISYSCON). The Army Reserve has a requirement for 96 SICPS systems required with only 10 on-hand. Consequently, the Army Reserve has to cross-level to support war fighter requirements. The Army Reserve continues to work with Army to reduce this equipment shortfall. TBC will have 7 out of the 119 systems required. Blue Force Tracker for the Army Reserve has a requirement of 7,492 systems with only 450 on-hand. BCS3 will have 958 systems out of 1,238 systems required. DTSS has a requirement of 9 systems with zero on-hand. AFATDS has one system on-hand with a requirement of 38 systems. ISYSCON will have 12 systems of its 89 system requirement.

Based on FY 2012 authorizations, EOH, and planned deliveries, All Source Analysis System/Distributed Ground Station, Army, and Defense Advanced GPS Receiver are expected to be fully fielded.

iii. Logistics Field Systems

Logistics Field Systems includes medical, fuel, water, food, and power systems and their associated accessories. Each of these systems has a number of unique subsystems. The Army strategy is to simultaneously fill equipment shortages while modernizing much of the AR's aging equipment. With 57 percent of the total Army's CSS structure, current budget projections show that by FY 2017, the Army Reserve will only have 85 percent of its medical equipment requirements, 53 percent of its fuel support equipment, 65 percent of its water support equipment, 61 percent of its field feeding equipment, and 85 percent of its power generation requirement. These continued shortages will force Army Reserve units to cross-level equipment for deployments, DSCA, and pre-mobilization and pre-deployment training requirements.

iv. Logistics Automation

Logistics Automation equipment includes transportation, quartermaster, and ordnance systems for all of the functions of CSS. This includes maintenance, transportation, supply, combat health support, field services, explosive ordnance disposal, human resources support, financial management operations, religious support, legal support, and band support. Logistics Automation provides support to equip, arm, fuel, feed, transport, and supply all Soldiers and assist in the life cycle management. The Army Reserve, with support from Army, continues to aggressively field the Standard Army Management Information Systems (STAMIS) to perform these functions. The systems are still undergoing fielding to include the Transportation

Coordinators Automated Information System (TC-AIMS II) currently 95 percent filled; the CSS Automated Information Systems Interface (CAISI) currently 73 percent filled; CSS Very Small Aperture Terminal currently 100 percent fielded. Several other systems are fully fielded, such as, Supply (PBUSE/SARSS), Maintenance (SAM-E), Aviation (ULLS-AE) and Ammunition (SASS-MOD). In total, the Army Reserve encompasses over 10,000 logistics STAMIS to support the war fight. With the short life cycle of automation systems (average 5 years), resourcing for replacement systems or logistics automation refresh remains a great concern for the Army Reserve.

The Army Reserve is an integral player in the development of the Global Combat Support System-Army (GCSS-A), an enterprise system that replaces 13 older STAMIS. The Army Reserve has provided a team of logisticians to work with the developers to ensure that the Army Reserve business processes are built into the base program. Currently, GCSS-A is scheduled to begin fielding in the last quarter of FY 2012 through FY 2016. The older hardware will be used to support this enterprise system, making life-cycle replacement or hardware refresh all the more imperative to the Army Reserve.

v. Intelligence and Electronic Warfare Systems

IEW systems are comprised of a variety of military intelligence and electronic warfare systems. Some noteworthy systems are the Prophet and the All Source Analysis System (ASAS)/ Distributed Common Ground System-Army (DCGS-A). The level of funding and modernization for Army Reserve IEW systems is fully funded under current plans. Fielding of Prophet Electronic Support Capability Spiral 1 is currently underway within the Army Reserve with no significant issues that will impact training or fielding.

vi. Mobility

Mobility equipment consists mainly of bridging, countermine, and engineering equipment all found in the engineer force structure. The Army Reserve retains approximately 30 percent of all the engineer units, which includes 32 percent of the Army's Multi-role Bridge Companies. The combined post-FY 2012 shortages of these items are estimated at $204M. By the end of FY 2012, the Army Reserve is projected to have 95 percent, 91 percent, and 93 percent of its bridging, countermine, and engineering equipment, respectively. However, many engineer equipment items are aged and in need of replacement. The Army is also working to resolve the Army Reserve's shortage in M88 Recovery Vehicles. Beginning in February 2011, Aniston Army Depot will distribute reset M88s to the Army Reserve to fill shortages and cycle out M88s in need of repair.

vii. Force Protection

Force Protection equipment includes CBRNE equipment and contains over 60 separate systems for the Army Reserve. A number of these systems are considered legacy or obsolete, and are currently being replaced by the more modern battlefield intrusion systems, chemical agent detectors, biological and protective shelters, and decontamination equipment. The on-hand quantities and modernization of these systems has improved over the last several years, but still has shortfalls in several key areas. The shortfall in modern Force Protection systems is over $8M beyond the FY 2010–FY 2015 budget period. The majority of this shortfall is represented by one system, the Chemical Biological Protective Shelter (CBPS). Requirements for the CBPS increase

over the FYDP. Increased funding for the Force Protection equipment will improve the Army Reserve's ability to meet both homeland and warfighting missions.

viii. Transportation

The Transportation Equipment Category contains LTVs, MTVs, HTVs, and their associated trailers and accessories.

LTVs: By the end of FY 2012, the Army Reserve is projected to have 87 percent of its LTV requirement; however, only 14 percent will be modern armor-capable HMMWVs. The remaining HMMWV fleet will be comprised of older legacy, non-armored vehicles that, while capable of performing the HD mission, are non-deployable in support of OEF and OND operations.

MTVs: The MTV fleet is projected to be 97 percent filled by the end of FY 2012; however, only 61 percent will be modernized.

HTVs: By the end of FY 2012, the Army Reserve is projected to have 100 percent of its HTV requirement; however, the 20-ton Dump Truck is non-deployable in the current theater of operations, and the M915A5 Line Haul Tractor is only 34 percent modernized, representing a $892M shortfall in our HTV fleet. By the end of FY 2012, the Army Reserve is projected to have 73 percent of its HEMTT requirement; this represents a $303M shortfall in our HEMTT fleet. By the end of FY 2012, the Army Reserve is projected to have 93 percent of its PLS requirement, representing a $163M shortfall in its PLS fleet.

The Army Reserve is projected to have 82 percent of its HEMTT Wrecker fleet requirement by the end of FY 2012; which represents a $302M critical shortfall in supporting the current war fighter in recovering the MRAP and MRAP All Terrain Vehicle (MATV) vehicles in theater.

For the Army Reserve to deploy its forces with the most modern equipment, equipment must be cross-leveled, thus jeopardizing future contingency mission success. Although we continue to move forward towards a more capable and modern TWV fleet the combined post-FY 2012 shortage of these vehicles is estimated at $610M.

ix. Soldier

Soldier equipment consists mainly of individual weapons, night vision devices, and thermal weapon sights. These devices are found in many units, from military police to engineer. While the budget fills many shortages through FY 2016, the combined post-FY 2012 shortages of these items are estimated at $217M. By the end of FY 2012, the Army Reserve is projected to have 98 percent, 88 percent, and 68 percent of its weapons, night vision devices, and thermal weapon sights, respectively. However, an increase in thermal weapon sight distribution to the Army Reserve is expected in the near future.

x. Fire Support

Fire Support equipment provides specialized equipment to civil affairs and psychological operations units. The Army Reserve provides a significant portion of those units, holding 89 percent and 86 percent of the civil affairs and psychological operations units, respectively.

Major equipment items purchased include the Tactical Local Area Network, Next Generation Loudspeaker, Mission Planning Kit, and Field Computing Device. Equipment shortages have greatly benefited from procurement funding the Special Operations Command provided through FY 2012, but the challenge is to transition funding of these programs into the Army's budget in the future. Adding to the resource complexity, the civil affairs MTOEs have not been updated in over two years. This has created friction in providing future funding for both procurement of new equipment and sustainment of existing systems.

D. Summary

After nine years of war, the most compelling evidence of the Army Reserve success is the confidence deployed commanders have in the quality and ability of our Army Reserve Soldiers. The men and women of the Army Reserve—Warrior-Citizens—are full-time patriots who put their civilian careers on hold to make a difference every day, whether it is in assisting Americans at home in natural disasters or spreading freedom across the globe. As the Army's operational reserve, the Army Reserve provides capabilities the Army can ill afford to maintain on active duty. The unique skill sets of Warrior-Citizens have proven, over the course of a century, to be cost-effective and cost efficient; thus, the Army Reserve has been and must be flexible, trained, and ready to deploy regardless of the ARFORGEN cycle a unit may be in.

The Army has made significant improvements in the funding and equipment distribution to the Army Reserve over the past nine years. HQDA has addressed many of our shortages and has secured funding to procure critical requirements. However, based upon the Army Reserve's assessment, significant amounts of funding are still needed to make the Army Reserve a relevant operational reserve. All of the equipment listed in the Army Reserve's FY 2012 *Table 8 Significant Major Item Shortages* are considered critical to seamlessly integrating the Army Reserve into the active force and impact the Army Reserve's ability to perform domestic as well as OCO. Current AR shortages of modernized equipment include 86 percent of its armored LTVs, 51 percent of its Light Medium Tactical Vehicles (LMTVs), and 95 percent of its SICPS (part of the ABCS). Regardless of the ARFORGEN phase, for the Army Reserve to be relevant in its role as an operational force, these systems must be available for OCO to support combatant commanders with trained and ready forces. Continued support from Congress with NGREA and Congressionally-added funding will allow the Army Reserve to continue its modernization efforts and ensure interoperability between the AC and the Army Reserve as well as enable the Army Reserve to fulfill its Title 10 responsibilities to provide DSCA.

USAR
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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Aircraft							
Helicopter, Cargo CH-47D	H30517	$5,000,000	34	34	34	34	24
Helicopter, Utility, UH-60L	H32361	$4,855,000	18	26	30	30	16
Helicopter, Attack AH-64D	H48918	$25,128,800	51	51	51	51	48
Airplane, Cargo Transport, C-12F	A30062	$3,068,422	4	4	5	5	0
Aircraft, Utility Cargo, UC-35A	Z95382		9	9	9	9	24
Aviation							
Detection Set Radar Signal: AN/APR-39A(V)1	D03159	$49,272	136	136	136	136	100
Battle Command and Control							
Power Plant, 60kW, TM, AN/MJQ-41	P42194	$96,819	11	30	30	30	11
Power Plant, 5kW, TM, AN/MJQ-36	P28151	$46,257	12	12	12	12	2
Power Plant, 10kW, AN/MJQ-37 TQG	P42262	$50,294	46	60	60	60	14
Power Plant, 5kW, TM, AN/MJQ-35	P28083	$46,322	15	251	251	251	18
Generator Set, 60kW, MEP-805A/B TQG	G74575	$26,705	102	259	259	259	184
Power Plant, 30kW, AN/MJQ-40 TQG	P42126	$85,594	29	45	45	45	30
Power Plant, 30kW 2EA PU-406 w/Dist Box AN/MJQ-10	P27819	$45,447	15	15	15	15	65
Generator Set, 5kW, MEP-802A TQG	G11966	$12,798	1,361	1,587	1,798	2,015	610
Gen Set Gas Eng: 3kW 60Hz 1-3PH Skd Tac Utility	J45699	$4,491	187	187	187	187	2
Generator Set, 10kW, MEP-003A	J35825	$13,635	367	367	367	367	41
Generator Set, 10kW, MEP-803A TQG	G74711	$14,345	557	1,002	1,002	1,002	1,082
Generator Set, 5kW, MEP-002A	J35813	$8,332	1,000	1,000	1,000	1,000	44
Gen Set Dsl Eng TM: 30kW 60Hz mtd on M-200A1 PU-406	J36383	$20,810	113	113	113	113	2
Generator Set, 15kW, PU-802 TQG	G53778	$31,481	203	203	203	203	492
Generator Set, 30kW, PU-803/B/G	G35851	$38,418	61	85	549	549	52
Gen Set: DED Skid-mtd 15kW 50/60Hz	G12170	$20,000	132	589	689	689	287
Power Supply: PP-6224/U	P40750	$4,322	1,192	1,192	1,192	1,192	4,503
Generator Set, 10kW, PU-798 TQG	G42170	$25,757	287	529	529	529	332
Generator Set, 60kW, PU-805 TQG	G78306	$44,185	31	42	42	42	24
Navigation Set Satellite Systems	N95862	$2,055	3,804	3,804	3,804	3,804	312
Gen Set Dsl Eng: 200kW 60Hz 3PHSkid Tactical Precise	J40150	$30,203	0	0	0	0	4
Gen Set Dsl Eng: 200kW 60Hz 3PH Skd Tactical Utility	J40158	$49,440	5	5	5	5	0
Lightweight Digital Facsimile: AN/UXC-7	L67964	$21,972	532	532	532	532	0
Gen Set: DED Skid-mtd 60kW 50/60Hz	G12034	$25,073	53	118	218	218	76
Battle Command Transport Networks							
Radio Set, SINCGARS AN/VRC-88A	R67194	$12,519	1,149	1,149	1,149	1,149	0
Radio Set, SINCGARS AN/VRC-119A	R83005	$10,117	895	895	895	895	0
Radio Set, SINCGARS AN/VRC-91A	R68010	$23,249	713	713	713	713	1

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Radio Set, SINCGARS AN/VRC-92A	R45407	$21,238	518	518	518	518	0
Radio Set, SINCGARS AN/VRC-90A	R67908	$13,178	3,913	3,913	3,913	3,913	3
Radio Set, SINCGARS AN/VRC-87A	R67160	$12,109	92	92	92	92	0
Radio Set, SINCGARS AN/VRC-89A	R44863	$22,822	786	786	786	786	0
Oscilloscope DC-100MHz: AN/USM-488	P30693	$2,084	254	254	254	254	160
Radio Terminal, Telephone, AN/VRC-97	T55957	$110,000	45	45	45	45	8
Data Transfer Device: AN/CYZ-10	D78555	$1,899	7,886	8,275	8,275	8,275	309
Central Office Communications: AN/TTC-39A(V)1	C41311	$2,801,000	1	1	1	1	0
Spectrum Analyzer, AN/USM-489(V)1	S01416	$37,378	5	5	5	5	23
Speech Security Equipment, TSEC/KY58	S01441	$3,063	281	281	281	281	13
Speech Security Equipment, TSEC/KY-57	S01373	$1,930	388	388	388	388	36
Telephone Digital Non-secure Voice: TA-1035/U	T45408	$2,459	305	305	305	305	0
Test Set, Radio, AN/GRM-114	T87468	$11,822	76	76	76	76	24
Radio Set, AN/PRC-104A	R55200	$12,000	6	6	6	6	513
Radio Set, HF, AN/GRC-193A	H35404	$37,000	28	28	28	28	0
Radio Terminal Set: AN/TRC-170 (V)3	R93035	$1,000,000	20	20	20	20	0
Radio Terminal Set: AN/TRC-170 (V)2	R92967	$2,000,000	11	11	11	11	0
Radio Set: AN/GRC-106	Q32756	$18,602	79	79	79	79	175
Net Control Device: KYX-15/TSEC	N02758	$2,300	156	156	156	156	0
Electronic Transfer Keying Device: KYK-13/TSEC	E98103	$235	473	473	473	473	104
Digital Data Generator: SG-1139/G	D37041	$5,100	72	72	72	72	4
Combat Mobility							
Bridge Erection Set, Fixed Bridge, 97CLE53	C22126	$488,354	5	5	5	5	18
Bridge Erection Set, Fixed Bridge, 97CLE52	C22811	$964,515	9	9	9	9	16
HEMTT Common Bridge Transporter, M1977	T91308	$226,150	505	573	573	573	504
Loader Scoop Type, DED w/MultiPurpose Bucket	L76556	$92,895	117	117	117	117	31
Tractor, Whld Excavator, SEE	T34437	$110,000	272	272	272	272	137
Detecting Set Mine: Ptbl Metallic (AN/PSS-11)	G02341	$2,450	1,429	1,429	1,429	1,429	788
Transporter Bridge Floating	X23277	$102,218	3	3	3	3	0
Interior Bay Bridge, Floating	K97376	$111,968	308	313	343	343	270
Ramp Bay Bridge Floating	R10527	$134,112	87	94	95	95	108
Field Logistics							
Container Assembly Refrigerated: w/9K BTU Ref Unit	C84541	$58,326	173	173	173	173	79
Welding Shop Trailer Mounted: Oxy-Acet/Elec Arc	W48391	$43,250	249	254	254	254	86
Tank Assembly Fabric Collapsible: 3K gal Water	T19033	$2,377	105	105	105	105	0
Truck, Forklift, ATLAS	T73347	$166,639	676	747	770	770	795
Truck Tractor: Yard 46000 GVW 4X2	T60353	$96,051	98	98	98	98	280
Welding Shop, Trailer Mounted	Y48323	$9,603	2	2	2	2	105
Food Sanitation Center	S33399	$33,865	275	281	281	281	427
Forward Area Water Point Supply System	F42612	$19,484	51	125	125	125	0
Tank Assembly Fabric Collapsible: 20K gal Petroleum	T12620	$6,065	2	2	2	2	0
Shop Equipment Auto Maint and Repair: FM Suppl No 2	T25756	$46,988	7	7	7	7	0
Shop Equipment Auto Maint and Repair: FM Suppl No 1	T25619	$58,235	23	23	23	23	0

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Tank Unit Liquid Dispensing Trailer Mounting:	V19950	$2,000	263	263	263	263	788
Testing Kit Petroleum: Aviation Fuel Contamination	T05741	$9,760	192	192	192	192	0
Tank Fabric Collapsible: Water 3K gal	V15018	$1,762	1	1	1	1	632
Tank Assembly Fabric Collapsible: 10K gal Petroleum	V12552	$6,775	113	113	113	113	0
Shelter, Tactical Expandable Twoside	S01359	$223,219	75	75	75	75	151
Tool Outfit Hydraulic System: Test & Repair 3/4 ton TM	T30377	$91,947	38	48	50	52	172
Truck, Forklift, DED 50k lb, RT, Cont Hdlr	T48941	$159,138	77	77	77	77	96
Truck, Forklift, DED 6k lb, RT, Ammo Hdlg	T48944	$72,370	266	266	266	266	194
Truck, Forklift, DED 4k lb, Rough Terrain	T49255	$75,000	499	499	499	499	630
Shop Equipment Auto Maint & Repair	T24660	$120,827	25	25	25	25	2
ROWPU Water Purification System, 3000 GPH	W47225	$748,000	27	27	27	27	30
Test Set, Elect Sys Direct Support (DESETS)	T52849	$561,312	1	1	1	1	0
Fork Lift: DED 10000 lb Cap 48in Ld Ctr Rough Terrain	T49119	$75,923	284	284	284	284	110
Crane Wheel Mtd: 20 ton w/Boom Crane 30ft w/Blk Tkle	F39378	$162,393	0	0	0	0	26
Laundry Unit Trailer Mounted: Single Trailer 60 LB CAP	L48315	$54,944	38	38	38	38	20
Terminal Tactical Petroleum: Marine	T56041	$1,400,873	0	0	0	0	12
Hypochlorination Unit Water Purif Frame mtd: 100 GPM	K60988	$14,342	17	17	17	17	0
Water Storage/Distribution Set, 800k gal	W37311	$200,508	6	6	6	6	0
Laboratory Petroleum Semitrailer Mounted:	L33800	$650,000	12	12	12	12	7
Pumping Assy Tactical Water Distribution: TM 600GPM	P97369	$27,426	30	30	30	30	0
Pumping Assy Flambl Liq Eng Drvn Whl: 4IN 350GPM	P97119	$25,870	126	126	126	126	0
Refrigeration Unit Mechanical Panel Type: 10K BTU	R61428	$10,086	84	84	84	84	0
Anes App Gas: W/O2 Monitor N2O O2 & Volatile Liq	A62773	$42,123	60	61	66	76	78
Electronic Shop Semitrailer Mounted: AN/ASM-189	H01855	$169,817	58	58	58	58	17
Fuel System Supply Point, Portable 60k gal	J04717	$30,213	174	174	174	174	86
Crane Wheel Mounted: Hyd Rough Terrain (RTCC)	C39398	$450,194	60	60	60	60	4
Filter-separator Liquid Fuel: 350GPM 150PSI	H52087	$4,041	435	435	435	435	0
Ramp Loading Vehicle: Whl-mtd 16K lb Capacity	R11154	$7,229	153	153	153	153	0
Electronic Shop Shelter Mounted Avionics: AN/ASM-147	H01912	$82,000	30	30	30	30	18
Electronic Shop Avionics, AN/ASM-146	H01907	$124,000	103	103	103	103	209
Bath Unit Portable: GED 8-9 SH	B43663	$8,186	12	12	12	12	6
Forward Area Refueling Equipment: (FARE)	H94824	$70,000	64	64	64	64	6
Floodlight Set Trailer Mounted: 3 Floodlights 1000 Watt	F79334	$4,489	229	229	229	229	1,338
Force Protection							
Radiacmeter: IM-93/UD	Q20935	$73	2,494	2,494	2,494	2,494	10
Chemical Agent Monitor, Improved (ICAM)	C05701	$7,500	5,309	5,309	5,309	5,309	5,727
Decontaminating Apparatus, M17	D82404	$23,121	525	525	525	525	229
Mask, Protective, Combat Vehicle, M42	M18526	$331	3,618	3,663	3,663	3,663	3,877
Mask CBR: Protective Field	M11895	$93	188	188	188	188	0
Radiac Set, AN/PDR-75	R30925	$2,978	1,202	1,202	1,202	1,202	1,865
Mask, Chemical Biological, M40	M12418	$265	169,839	169,839	169,839	169,839	151,195
Radiac Set, AN/UDR-13	R31061	$631	9,415	9,415	9,415	9,415	10,220
Simplified Collective Protection Equip, M20	C79000	$17,599	724	730	730	730	1,088

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Chemical Agent Alarm, M8A1	A32355	$8,432	4,213	4,213	4,213	4,213	98
Decontaminating Apparatus Power Driven Skid-mtd	F81880	$30,968	90	90	90	90	90
Generator Smoke Mechanical: Motorized	G58151	$145,000	1	1	1	1	0
General Engineering							
Mixing Plant Asphalt: DSL/Elec Pwr 100 TO 150 ton	M57048	$1,254,600	8	8	8	8	7
Scraper Earth Moving SP, 14-18 Cu Yd	S56246	$149,523	196	196	196	211	200
Compactor, High Speed	E61618	$171,438	45	45	45	45	50
Crane Wheel Mtd: Hydraulic Light 7-1/2 ton w/Cab	C36151	$58,481	36	36	36	36	20
Crane, Whl-mtd, 25-ton, ATEC AT422T	C36586	$313,521	113	113	113	113	75
Grader Road Motorized, DED Hvy	G74783	$98,045	180	191	191	191	3
Tractor, FT, Med, Cat D7 w/Scarif Winch	W76816	$205,000	277	282	301	322	240
Tractor, FT, Med, Cat D7 w/Scarif Ripper	W83529	$245,275	272	278	301	327	150
Crane Truck-mtd: Hyd 25 ton CAT (CCE)	F43429	$160,953	11	11	11	11	2
Tactical Water Distrib Eq Set, (TWDS RDF)	T09094	$660,000	5	5	5	5	6
Loader Scoop Type, DED w/5 Cy Gp Bucket	L76321	$147,930	99	104	104	104	13
Distributor Water Tank, 6k gal, Tlr-mtd	D28318	$30,289	57	57	57	57	96
Spreader Lifting Front Container: Top Lift Semiauto	U12203	$4,490	74	74	74	74	0
Fire Fighting Equipment Set, Truck-mtd	H56391	$151,000	3	3	3	3	28
Crush Screen and Wash Plant: Whl-mtd 150-225 TPH	F49673	$1,543,579	2	2	2	2	0
Grader Road Motorized: DED 10K lb 12ft Blade	J74920	$62,181	2	2	2	2	0
Crane-shovel Crwlr-mtd: w/Boom 50ft 40 ton	F40474	$270,000	2	2	2	2	0
Maneuver Combat Vehicles							
Recovery Vehicle, Medium, M88A1	R50681	$1,210,755	23	23	23	23	48
Maneuver Systems							
Night-vision Sight, AN/UAS-12	N04982	$116,014	20	20	20	20	8
Medical Field Systems							
Tent: Extendable Modular Surgical Forest Green Type VII	T47813	$25,911	71	71	71	71	118
Tent: Extendable Modular Medical Forest Green Type II	T47745	$57,836	91	91	91	91	348
Medical Equip Set, Trauma Field (2)	M30499	$161,385	99	99	99	99	134
Medical Equip Set, Sick Call Field (2)	M30156	$52,297	75	75	75	75	142
MMS X-ray Radiographic: DEPMEDS	M86675	$203,223	4	4	4	4	16
Operating and Treatment Unit Dental Field	P19377	$17,121	9	9	9	9	200
Medical Materiel Set Intermediate Care Ward: DEPMEDS	M08599	$266,429	38	39	39	39	174
Medical Materiel Set Central Materiel Service: DEPMEDS	M08417	$1,406,258	39	40	40	40	52
Medical Materiel Set Operating Room: DEPMEDS	M72936	$680,391	36	36	36	36	52
Medical Materiel Set Post-op/ICU Ward: DEPMEDS	M09576	$581,581	41	41	41	41	68
Medical Materiel Set X-ray: DEPMEDS	M72300	$307,992	2	2	2	2	18
Defibrillator Monitor Recorder	D86072	$29,917	79	134	180	200	315
Other Systems							
Cleaner Steam Pressure Jet Trailer Mounted:	C32887	$18,528	498	498	498	498	0
Soldier Systems							
Night-vision Sight, AN/PVS-4 w/Img	N04732	$8,535	3,454	3,454	3,454	3,454	1,448
Night-vision Goggles, AN/PVS-7B	N05482	$6,000	20,429	20,429	20,429	20,429	82,989

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Laser IR Observation Set (MELIOS), AN/PVS-6	M74849	$22,015	2	2	2	2	1,765
Viewer Infrared: AN/PAS-7	Y03104	$16,779	30	30	30	30	0
Night-vision Goggles, AN/PVS-5	N04456	$4,300	6,213	6,213	6,213	6,213	0
Soldier Weapons							
Rifle, 5.56mm, M16A2	R95035	$503	113,369	113,369	113,369	113,369	115,328
Command Launch Unit, Javelin	C60750	$231,671	40	40	40	40	90
Rifle, 5.56mm, M16A4	R97175	$950	3,759	3,759	3,759	3,759	2,035
Machine Gun, 7.62mm, M240B	M92841	$6,000	1,847	2,839	2,839	2,839	5,700
Carbine, 5.56mm, M4	R97234	$1,329	20,058	23,291	23,291	23,291	22,784
Machine Gun, Grenade, 40mm, MK19 MOD III	M92362	$15,320	2,147	2,505	2,505	2,505	2,077
Machine Gun, 5.56mm, M249	M09009	$3,830	12,321	12,321	12,321	12,321	12,162
Support Systems							
Vessel Logistic Support: 245 To 300 ft long	V00426	$26,748,800	3	3	3	3	3
Tug: Large Coastal and Inland Waterway Diesel	T68330	$12,500,000	2	2	2	2	3
Landing Craft Utility: Roll On Roll Off Type	L36989	$5,000,000	7	7	7	7	20
Landing Craft Mechanized: 69 ft	L36739	$162,612	14	14	14	14	8
Trailers							
Semitrailer Tanker, 5000-gal Bulk Haul, M967	S10059	$77,550	1,078	1,078	1,078	1,078	1,080
Semitrailer Tanker, 5000-gal POL, M969	S73372	$97,413	395	395	395	395	421
Semitrailer, 34-ton Flatbed, M872	S70159	$43,252	1,672	1,672	1,672	1,672	1,569
Semitrailer Tank Fuel	YF301G		1	1	1	1	0
Semitrailer, 22.5-ton Flatbed, M871	S70027	$33,156	870	870	870	870	761
Trailer Bolster: General Purpose 4 Ton 4 Wheel	W94536	$10,234	360	360	360	360	188
Semitrailer Van: Electronic 3-6 ton 2-wheel 30ft Body	S74353	$24,125	5	5	5	5	1
Semitrailer Van, 6-ton Repair Parts, M749/M750	S74832	$32,952	27	27	27	27	4
Semitrailer Van: Supply 12 ton 4-wheel	S75175	$84,466	257	257	257	257	51
Semitrailer Tank: Petroleum 7500 gal Bulk Haul	S73119	$27,774	337	337	337	337	480
Trailer, HEMAT, 11-ton, M989A1	T45465	$34,714	117	117	117	117	367
PLS Trailer, 16.5-ton, M1076	T93761	$46,731	2,291	2,306	2,484	2,520	2,813
Trailer, Cargo, 3/4-ton, M101	W95537	$4,474	1,734	1,734	1,734	1,734	97
Trucks							
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	$278,409	74	74	74	74	61
HEMTT Fuel Tanker, 2500gal, M978	T87243	$268,440	134	134	134	134	202
LMTV 2.5-ton Cargo Truck, M1078	T60081	$176,428	1,805	1,805	1,805	1,805	3,143
HEMTT Cargo Truck, w/Med Crane, M985	T39586	$272,033	66	66	66	66	120
Truck Tractor, 20-ton MET, M920	T61171	$74,288	123	123	123	123	60
LMTV 2.5-ton Cargo Truck, w/ LAPES/AD, M1081	T41995	$103,220	9	9	9	9	0
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	$149,600	364	364	364	364	650
HMMWV Ambulance, 2-litter, M996	T38707	$49,357	6	6	6	6	0
HMMWV Ambulance, 4-litter, M997	T38844	$113,998	219	219	219	219	366
LMTV 2.5-ton Cargo Truck, M1079	T93484	$230,363	69	69	69	69	197
HMMWV Cargo/Trp Carrier, M998	T61494	$36,076	5,125	5,125	5,125	5,125	12,104
HMMWV Armt Carrier, Armd, M1025	T92242	$74,969	1,544	1,544	1,544	1,544	392

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HMMWV Shelter Carrier, Heavy, M1097	T07679	$61,665	8,734	10,025	10,434	11,251	350
HMMWV Cargo/Trp Carrier, W/W, M1038	T61562	$36,672	217	217	217	217	107
HMMWV Shelter Carrier, M1037	T07543	$36,932	112	112	112	112	40
HEMTT Cargo Truck, w/Lt Crane, M977	T59278	$251,388	41	41	41	41	266
PLS Transporter, M1075	T40999	$360,139	1,057	1,057	1,057	1,057	1,716
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	$260,574	4	4	4	4	227
HEMTT Wrecker, M984	T63093	$379,000	256	256	256	256	458
Truck Tractor, 14-ton LET, M916	T91656	$166,223	1,088	1,088	1,088	1,088	349
Truck Tractor, 14-ton Line Haul, M915	T61103	$162,968	1,991	1,991	1,991	1,991	2,280
PLS Transporter, M1074	T41067	$288,015	76	76	76	76	0
MTV 5-ton Cargo Truck, M1085	T61704	$170,073	3	3	3	3	243
MTV 5-ton Cargo Truck, M1083	T61908	$184,333	717	717	717	717	3,747
MTV 5-ton Tractor Truck, M1088	T61239	$167,746	356	356	356	356	1,213
Truck Tractor, HETS, M1070	T59048	$256,704	430	430	430	430	481
MTV 5-ton Wrecker, M1089	T94709	$331,680	101	101	101	101	242
MTV 5-ton Dump Truck, M1090	T64911	$209,309	30	30	30	30	412

Table 2

USAR
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 2011.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Airplane, Cargo, Transport, C-12R	A30062	14	
Helicopter, Cargo CH-47D	H30517	20	
Helicopter, Utility UH-60L	H32361	14	
Helicopter, Attack AH-64D	H48918	22	
Airplane, Cargo, Transport, UC-35A	Z95382	11	
Battle Command and Control			
Generator Set, 15kW, PU-802 TQG	G53778	12	
Generator Set, Trailer Mounted, PU-406	J36383	26	
Combat Mobility			
Loader Scoop Type, DED w/MultiPurpose Bucket	L76556	25	
HEMTT Common Bridge Transporter, M1977	T91308	14	
Field Logistics			
Crane, Wheel-mtd, Hydraulic, Rough Terrain (RTCC)	C39398	21	
Electronic Shop, AN/ASM-189	H01855	29	
Laundry Unit, Trailer Mounted	L48315	29	
Ramp Loading Vehicle	R11154	20	
Truck, Forklift, DED 50k lb, RT, Cont Hdlr	T48941	25	
Truck, Forklift, DED 6k lb, RT, Ammo Hdlg	T48944	19	
Truck, Forklift, Rough Terrain, M-10A	T49119	27	
Truck, Forklift, DED 4k lb, Rough Terrain	T49255	25	
Truck, Tractor, M878	T60353	17	
Truck, Forklift, ATLAS	T73347	8	
General Engineering			
Crane, Wheel-mtd, 25-ton, ATEC AT422T	C36586	11	
Distributor Water Tank, 6k gal, Tlr-mtd	D28318	23	
Crane, Truck-mtd, Hydraulic, 25-ton, CCE	F43429	33	
Fire Fighting Equipment Set, Truck-mtd	H56391	20	
Loader Scoop Type, DED w/5 Cy Gp Bucket	L76321	30	
Asphalt Mixing Plant	M57048	15	
Scraper, Earth Moving, Self-propelled, CCE	S56246	25	
Maneuver Combat Vehicles			
Recovery Vehicle, Medium, M88A1	R50681	35	
Trailers			
Semitrailer Tanker, 5000-gal Bulk Haul, M967	S10059	20	
Semitrailer, 22.5-ton Flatbed, M871	S70027	17	
Semitrailer, 34-ton Flatbed, M872	S70159	24	
Semitrailer, Fuel Tank, M1062	S73119	17	
Semitrailer Tanker, 5000-gal POL, M969	S73372	18	
Semitrailer Van, Electronic, M373A2	S74353	24	
Semitrailer Van, 6-ton Repair Parts, M749/M750	S74832	36	

USAR
Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Semitrailer Van, Supply, M129A1C	S75175	29	
Trailer, HEMAT, 11-ton, M989A1	T45465	15	
PLS Trailer, 16.5-ton, M1076	T93761	14	
Trailer, Bolster, General Purpose, 4-ton, M796	W94536	32	
Trailer, Cargo, 3/4-ton, M101	W95537	30	
Trucks			
HMMWV Shelter Carrier, M1037	T07543	20	
HMMWV Shelter Carrier, Heavy, M1097	T07679	8	
HMMWV Ambulance, 2-litter, M996	T38707	22	
HMMWV Ambulance, 4-litter, M997	T38844	22	
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	23	
HEMTT Cargo Truck, w/Med Crane, M985	T39586	22	
PLS Transporter, M1075	T40999	8	
PLS Transporter, M1074	T41067	16	
LMTV 2.5-ton Cargo Truck, w/ LAPES/AD, M1081	T41995	13	
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	20	
Truck Tractor, HETS, M1070	T59048	16	
HEMTT Cargo Truck, w/Lt Crane, M977	T59278	21	
LMTV 2.5-ton Cargo Truck, M1078	T60081	10	
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	6	
Truck Tractor, 14-ton Line Haul, M915	T61103	16	
Truck Tractor, 20-ton MET, M920	T61171	30	
MTV 5-ton Tractor Truck, M1088	T61239	8	
HMMWV Cargo/Trp Carrier, M998	T61494	19	
HMMWV Cargo/Trp Carrier, W/W, M1038	T61562	20	
MTV 5-ton Cargo Truck, M1085	T61704	4	
MTV 5-ton Cargo Truck, M1083	T61908	4	
HEMTT Wrecker, M984	T63093	17	
MTV 5-ton Dump Truck, M1090	T64911	15	
HEMTT Fuel Tanker, 2500gal, M978	T87243	21	
Truck Tractor, 14-ton LET, M916	T91656	15	
HMMWV Armt Carrier, Armd, M1025	T92242	19	
LMTV 2.5-ton Cargo Truck, M1079	T93484	6	
MTV 5-ton Wrecker, M1089	T94709	5	

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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.*

Nomenclature	FY 2012	FY 2013	FY 2014
P-1R data from FY 2012 President's Budget Submission was not available in time for publication in the NGRER.			
The FY 2012 P-1R will be available on the Office of the Under Secretary of Defense (Comptroller) public web site (http://comptroller.defense.gov/index.html) upon release of the FY 2012 President's Budget Submission.			

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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
FY 2009 Title III NGREA Equipment			
Heavy Expanded Mobility Tactical Truck (HEMTT)	$26,727,426		
Truck, Tractor Line Haul, M916A3	7,945,948		
Joint Small Transportable Decont System (JSTDS-SS)	6,200,000		
Power Distribution System	4,215,316		
Light Tactical Trailer, 3/4-ton	3,190,800		
Trailer, Palletized Load System (PLS)	2,040,480		
Test Measure Devices	2,020,930		
FY 2009 Title IX NGREA Equipment			
Family of Medium Tactical Vehicles (FMTV)	17,679,091		
Shop Equipment: Automotive Vehicle	9,746,582		
Army Battle Command System (ABCS)	9,150,540		
Civil Affairs Communication Systems	8,600,000		
Line Haul Light Equipment Transporter	6,846,893		
Psychological Operations Equipment	5,381,265		
Power (Generators)	3,769,920		
Liquid Logistics (Water Tank Trailer)	2,872,078		
UAS Intelligence/Electronic Warfare Equipment	2,488,992		
Maintenance Support	2,007,768		
Scraper Earth Moving	1,798,402		
Tool Outfit Test and Repair	1,339,550		
Battlefield Anti-intrusion System	1,307,264		
Field Feeding (Assault Kitchen)	1,239,819		
Environmental Control Units	776,006		
FY 2010 Title III NGREA Equipment			
Heavy Expanded Mobility Tactical Truck (HEMTT)		$42,371,658	
Route Clearance		7,500,000	
Soldier Support (Laundry Advanced System)		6,134,664	
Material Handling		4,733,361	
Tactical Local Area Network (TACLAN)		4,698,000	
Power		3,462,596	
Liguid Logistics		3,410,736	
Command Post (Computer Set)		3,179,544	
Field Feeding		3,010,989	
Tactical Radios		2,771,650	
Power Support		1,574,370	
Battlefield Anti-intrusion System		1,021,300	
Diagnostic Test Set		417,705	
Enhanced Container Handling Unit		313,200	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
Trailer Cargo: High Mobility		302,848	
Weapon Support (Mount Tripod Machine Gun)		69,251	
Tester Density-moisture Soil-Asphalt-Concrete: Nuclear Meth (CCE)		28,004	
Total	**$127,345,070**	**$84,999,876**	

1. FY 2011 NGREA data from FY 2011 Defense Appropriations Bill was not available in time for publication in the NGRER. Data for FY 2011 will be provided in next year's NGRER.

Table 5

USAR
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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Battle Command and Control					
Generator Set, 5kW, MEP-802A TQG	G11966	+35	+1		
Generator Set, 10kW, MEP-803A TQG	G74711		+1	+1	
Generator Set, 5kW, MEP-002A	J35813		+4		
Generator Set, 15kW, PU-802 TQG	G53778	+9			
Field Logistics					
Food Sanitation Center	S33399		+4	+3	
Electronic Shop Avionics, AN/ASM-146	H01907		+14	+5	
Force Protection					
Mask, Protective, Combat Vehicle, M42	M18526		+27		
Radiac Set, AN/PDR-75	R30925	+1		+3	
Mask, Chemical Biological, M40	M12418	+21	+531	+5	
Radiac Set, AN/UDR-13	R31061	+3	+4		
Simplified Collective Protection Equip, M20	C79000		+2		
Medical Field Systems					
Medical Equip Set, Trauma Field (2)	M30499		+10		
Medical Materiel Set Central Materiel Svc: DEPMEDS	M08417		+2		
Medical Materiel Set Post-op/ICU Ward: DEPMEDS	M09576		+4		
Soldier Systems					
Night-vision Sight, AN/PVS-4 w/Img	N04732	+547	+254	+37	
Night-vision Goggles, AN/PVS-7B	N05482	+9,292	+1,482	+3,028	
Laser IR Observation Set (MELIOS), AN/PVS-6	M74849	+43	+42	+4	
Soldier Weapons					
Rifle, 5.56mm, M16A2	R95035	+705	+3,950	+530	
Command Launch Unit, Javelin	C60750	+3			
Machine Gun, 7.62mm, M240B	M92841	+395	+2	+126	
Carbine, 5.56mm, M4	R97234	+185	+164	+14	
Machine Gun, Grenade, 40mm, MK19 MOD III	M92362	+6	+9		
Machine Gun, 5.56mm, M249	M09009	+16	+671	+8	
Trailers					
Semitrailer Tanker, 5000-gal POL, M969	S73372	+2	+35	+30	
Semitrailer Tank: Petroleum 7500 gal Bulk Haul	S73119		+20	+20	
Trailer, HEMAT, 11-ton, M989A1	T45465	+44	+116	+91	
Trucks					
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	+3	+5		
LMTV 2.5-ton Cargo Truck, M1078	T60081	+1	+3		
HEMTT Cargo Truck, w/Lt Crane, M977	T59278		+46		
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518		+27		
MTV 5-ton Cargo Truck, M1083	T61908	+5			

USAR
FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 Planned Transfers & Withdrawals							
Aircraft							
Helicopter, CH-47D	H30517	+8	0				
Helicopter, UH-60L	H32361	+9	0				
Battle Command C2							
Computer Set, OL-583/TYQ	C18514	+2	0				
Battle Command Sustainment Support System (BCS3)	C56827	+25	0				
Generator Set, 5kW, MEP-802A TQG	G11966	+17	0				
Generator Set, 60kW, MEP-806A/B TQG	G12034	+16	0				
Generator Set, 15kW, MEP-804A/B TQG	G12170	+6	0				
Generator Set, 30kW, PU-803/B/G	G35851	+35	0				
Generator Set, 10kW, PU-798 TQG	G42170	+33	+58				
Generator Set, 15kW, PU-802 TQG	G53778	+2	0				
Generator Set, 60kW, MEP-805A/B TQG	G74575	+17	0				
Generator Set, 10kW, MEP-803A TQG	G74711	+47	0				
Generator Set, 60kW, PU-805 TQG	G78306	+3	0				
Generator Set, 5kW, MEP-002A	J35813	+4	0				
Generator Set, 10kW, MEP-003A	J35825	+3	0				
Generator Set, 30kW, PU-406B/M	J36383	+1	0				
Generator Set, 3kW, MEP-016	J45699	+5	0				
Lightwt Digital Facsimile: AN/UXC-7	L67964	+13	0				
Navigation Set Satellite Systems	N95862	+25	0				
Power Plant, 30kW, AN/MJQ-10	P27819	+1	0				
Power Plant, 60kW, AN/MJQ-41 TQG	P42194	+1	0				
Power Plant, 10kW, AN/MJQ-37 TQG	P42262	+4	0				
Battle Command Transport Networks							
Digital Data Generator: SG-1139/G	D37041	+12	0				
Data Transfer Device: AN/CYZ-10	D78555	+106	0				
Electronic Keying Dev: KYK-13/TSEC	E98103	+5	0				
Radio Set, AN/GRC-193A	H35404	+38	0				
Net Control Device: KYX-15/TSEC	N02758	+359	0				
Radio Set, AN/GRC-213	R30895	+4	0				
Radio Set, SINCGARS AN/VRC-92A	R45407	+3	0				
Radio Set, SINCGARS AN/VRC-87A	R67160	+3	0				
Radio Terminal Set: AN/TRC-170 (V)3	R93035	+8	0				
Spectrum Analyzer, AN/USM-489(V)1	S01416	+10	0				
Speech Security Equipment, TSEC/KY58	S01441	+65	0				

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Radio Terminal, Telephone, AN/VRC-97	T55957	+168	0				
Test Set, Radio, AN/GRM-114	T87468	+4	0				
Combat Mobility							
Bridge Erection Set, Fixed Bridge	C22811	+2	0				
Detecting Set Mine, AN/PSS-11	G02341	+4	0				
Interior Bay Bridge, Floating	K97376	+22	0				
Ramp Bay Bridge Floating	R10527	+10	0				
Tractor, Whld Excavator, SEE	T34437	+2	0				
Field Logistics							
Forward Area Water Point Supply Sys	F42612	+1	0				
Electronic Shop Avionic, AN/ASM-146	H01907	+1	0				
Forward Area Refueling Equipment	H94824	+2	0				
Food Sanitation Center	S33399	+62	0				
Testing Kit: Aviation Fuel Contamination	T05741	+5	0				
Shop Equipment Auto Maint & Repair	T24660	+1	0				
Shop Equipment Auto Maint and Repair: FM Suppl No 2	T25756	+1	0				
Tool Outfit Hydraulic Sys: Test/Repair	T30377	+4	0				
Forklift, 6k lb, RT, Ammo Hdlg	T48944	+3	0				
Forklift, 4k lb, Rough Terrain	T49255	+1	0				
Truck Tractor: Yard 46000 GVW 4X2	T60353	+15	0				
Force Protection							
Chemical Agent Alarm, M8A1	A32355	+2	0				
Chemical Agent Monitor, Improved (ICAM)	C05701	+22	0				
Decontaminating Apparatus, M17	D82404	+2	0				
Mask CBR: Protective Field	M11895	+81	0				
Mask, Chemical Biological, M40	M12418	+670	0				
Mask, Protective, Combat Vehicle, M42	M18526	+15	0				
Radiacmeter: IM-93/UD	Q20935	+5	0				
Radiac Set, AN/PDR-75	R30925	+6	0				
Radiac Set, AN/UDR-13	R31061	+387	0				
General Engineering							
Crane: Hydraulic 7-1/2 ton w/Cab	C36151	+1	0				
Grader Road Motorized, DED Hvy	G74783	+4	0				
Fire Fighting Equip Set, Truck-mtd	H56391	+1	0				
Medical Field Systems							
Defibrillator Monitor Recorder	D86072	+5	0				
Soldier Systems & Weapons							
Laser IR Obs Set, AN/GVS-5	L40063	+19	0				
Laser IR Observation Set, AN/PVS-6	M74849	+42	0				
Night-vision Goggles, AN/PVS-5	N04456	+30	0				
Night-vision Sight, AN/PVS-4 w/Img	N04732	+1,710	0				

Table 6

USAR
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Night-vision Goggles, AN/PVS-7B	N05482	+1,141	0				
Viewer Infrared: AN/PAS-7	Y03104	+12	0				
Command Launch Unit, Javelin	C60750	+8	0				
Machine Gun, 5.56mm, M249	M09009	+5	0				
Machine Gun, Grenade, 40mm, MK19	M92362	+253	0				
Machine Gun, 7.62mm, M240B	M92841	+25	0				
Rifle, 5.56mm, M16A2	R95035	+639	0				
Carbine, 5.56mm, M4	R97234	+151	0				
Support Systems							
PLS Demountable Cargo Bed	B83002	+216	0				
Printing Plant, SW Transportable	P61665	+3	0				
Vessel Logistic Support: 245 To 300 ft	V00426	+1	0				
Trailers							
Semitrailer, 22.5-ton Flatbed, M871	S70027	+11	0				
Semitrailer Tank, Fuel, 12-ton, M131	S72983	+15	0				
Semitrailer Van, Supply, 12-ton, M129	S75175	+1	0				
Trailer, Cargo, 3/4-ton, M101	W95537	+3	0				
Trucks							
HMMWV Ambulance, 2-litter, M996	T38707	+2	0				
PLS Transporter, M1075	T40999	+2	0				
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	+5	0				
LMTV 2.5-ton Cargo Truck, M1078	T60081	+1	0				
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	+13	0				
HMMWV Cargo/Trp Carrier, M998	T61494	+11	0				
HMMWV Cargo/Trp Carrier, W/W, M1038	T61562	+38	0				
MTV 5-ton Cargo Truck, M1083	T61908	+1	0				
HEMTT Wrecker, M984	T63093	+1	0				
MTV 5-ton Dump Truck, M1090	T64911	+5	0				
HEMTT Fuel Tanker, 2500gal, M978	T87243	+16	0				
Truck Tractor, 14-ton LET, M916	T91656	+8	0				
LMTV 2.5-ton Cargo Truck, M1079	T93484	+1	0				
MTV 5-ton Wrecker, M1089	T94709	+3	0				
FY 2008 P-1R Equipment							
Modification of Aircraft							
Global Air Traffic Management (GATM) Rollup				4,800,000	4,800,000		
Support Equipment and Facilities							
Air Traffic Control				3,000,000	3,000,000		
Weapons and Other Combat Vehicles							
M240 Medium Machine Gun (7.62mm)				5,651,000	6,043,000		
Machine Gun, .50 cal M2 Roll				0	958,000		
M249 Saw Machine Gun (5.56mm)				10,521,000	11,423,000		
MK-19 Grenade Machine Gun (40mm)				0	1,828,000		

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
XM320 Grenade Launcher Module (GLM)				0	198,000		
Carbine, 5.56mm, M4				4,000,000	4,675,000		
Shotgun, Modular Accessory System (MASS)				0	64,000		
M240 Medium Machine Gun Mods				0	106,000		
Items Less Than $5M (WOCV-WTCV)				0	95,000		
Tactical and Support Vehicles							
Tactical Trailers/Dolly Sets				11,399,000	11,728,000		
Semitrailers, Tankers				33,000	33,000		
High Mobility Multipurpose Vehicle (HMMWV)				12,845,000	17,976,000		
Family of Medium Tactical Vehicles (FMTV)				154,232,000	251,248,000		
Firetrucks & Associated Firefighting Equipment				20,479,000	20,475,000		
Family of Heavy Tactical Vehicles (FHTV)				27,699,000	28,065,000		
Mine Protection Vehicle Family				67,694,000	38,760,000		
Truck, Tractor, Line Haul, M915/M916				26,451,000	26,425,000		
Heavy Expanded Mobile Tactical Truck (HEMTT) ESP				4,346,000	4,346,000		
Communications and Electronics Equipment							
NAVSTAR Global Positioning System (Space)				3,942,000	4,233,000		
SMART-T (Space)				193,000	193,000		
Global Broadcast Service (GBS)				1,056,000	1,056,000		
SINCGARS Family				0	40,000		
Bridge to Future Networks				58,752,000	58,752,000		
SPIDER APLA Remote Control Unit				576,000			
Radio, Improved HF (COTS) Family				0	3,000		
Medical Communications for Combat Casualty Care (MC4)				4,728,000	4,728,000		
Telecomm Security (TSEC) - Army Key Mgt System (AKMS)				1,331,000	1,401,000		
Information Systems Security Program (ISSP)				1,676,000	1,676,000		
Digital Topographic Support System (DTSS) (MIP)				7,253,000	7,253,000		
Counterintelligence (CI) and HUMINT Info Mgt Sys (CHIMS) MIP				397,000	0		
Night Vision Devices				13,503,000	18,609,000		
Night Vision, Thermal Weapon Sight				0	2,070,000		
Battle Command Sustainment Support System (BCS3)				2,081,000	2,081,000		
Air & Missile Defense Planning and Control System (AMDPCS)				191,000	191,000		
TC AIMS II				0	4,000		
Joint Network Management System (JNMS)				53,000	53,000		
Single Army Logistics Enterprise (SALE)				0	20,780,000		
Items Under $5M - Electronics Equipment - Support				3,640,000	3,640,000		
Other Support Equipment							
CBRN Soldier Protection				0	21,000		
Smoke & Obscurant Family (SOF) (Non AAO Item)				1,900,000	1,900,000		
Tactical Bridging				24,260,000	24,260,000		
Tactical Bridge, Float-Ribbon				36,598,000	36,413,000		
Handheld Standoff Mine Detection System (HSTAMIDS)				5,682,000	5,712,000		

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Heaters and Environmental Control Units (ECUs)				4,323,000	4,403,000		
Laundries, Showers and Latrines				0	7,002,000		
Soldier Enhancement				0	288,000		
Field Feeding Equipment				3,302,000	10,994,000		
Mobile Integrated Remains Collection System				9,129,000	9,129,000		
Items Less Than $5M (Engineer Support)				0	24,000		
Distribution Systems, Petroleum & Water				6,777,000	6,777,000		
Water Purification Systems				9,288,000	9,288,000		
Combat Support Medical				36,290,000	36,290,000		
Mobile Maintenance Equipment Systems				603,000	1,667,000		
Items Less Than $5M (Maintenance Equipment)				116,000	0		
Skid Steer Loader (SSL) Family of Systems				6,900,000	0		
Scrapers, Earthmoving				4,940,000	4,940,000		
Mission Modules - Engineering				1,299,000	1,299,000		
Loaders				6,022,000	6,022,000		
Hydraulic Excavator				3,371,000	3,371,000		
High Mobility Engineer Excavator (HMEE) FOS				400,000	518,000		
Construction Equipment ESP				658,000	658,000		
Items Less Than $5M (Construction Equipment)				2,051,000	2,051,000		
Harbormaster Command and Control Center (HCCC)				9,119,000	0		
Generators and Associated Equipment				32,685,000	34,830,000		
Rough Terrain Container Handler (RTCH)				18,375,000	33,819,000		
All Terrain Lifting Army System (ATLAS)				10,032,000	18,172,000		
Integrated Family of Test Equipment (IFTE)				3,047,000	3,047,000		
Test Equipment Modernization (TEMOD)				387,000	387,000		
Physical Security Systems (OPA3)				216,000	372,000		
FY 2008 Title III NGREA Equipment							
Family of Medium Tactical Vehicles (FMTV)						$15,840,000	$15,840,000
Generators, 100kW PU-807A						5,005,000	0
Maintenance Spt Device/Internal Combustion Engine						4,941,300	4,933,642
Common Bridge Transporter						4,140,000	4,140,000
Joint Small Transportable Decontamination System (JSTDS-SS)						3,912,700	3,912,700
Battle Command Sustainment Support System (BCS3)						3,060,000	0
Power Distribution Illumination System Electric (PDISE)						2,400,000	2,400,000
FMTV Cargo Trailer						1,560,000	1,560,000
Tactical Electrical Power (3kW-60kW) TQG						1,242,000	1,149,101
Toolkit, Small Arms Repairman						875,000	308,175
Alarm, Chemical Agent, Automatic, M22						800,000	800,000
Shelter Tactical Expandable						620,000	615,873
Navigation Set Satellite Systems						300,000	294,132
Total				**$690,292,000**	**$822,663,000**	**$44,696,000**	**$35,953,624**

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 2011 Qty	Deployable?	
					Yes	No
Chemical Defensive Equipment						
Mask CBR, M17A2	M11895	Mask Chemical Biological, M40	M12418	28	X	
Radiac Set: AN/UDR-13	R31061	Radiacmeter: IM-93/UD	Q20935	1,311	X	
Construction Equipment						
Loader Scoop Type: DED w/5 CY GP Bucket (CCE)	L76321	Loader Scoop Type: DED w/Rock Bucket (CCE)	L76315	9	X	
Tractor FT, Med w/Buldoz w/Scarif Winch	W76816	Tractor, FT, Med, w/Scarif Winch	W83529	4	X	
Truck Tractor: Yard M878	T60353	Truck Tractor, Line Haul, M915	T61103	19	X	
Forklift, 4K lb, Rough Terrain	T49255	Forklift, RT, Ammo Hdlg	T48944	18	X	
Forklift, 4K lb, Rough Terrain	T49255	Forklift, 10K lb Rough Terrain	T49119	23	X	
Truck, Forklift, ATLAS	T73347	Forklift, RT, Ammo Hdlg	T48944	13	X	
Truck, Forklift, ATLAS	T73347	Forklift, RT, Ammo Hdlg	T49119	43	X	
Electrical Generation						
Gen Set, 10kW, PU-798 TQG	G42170	Gen Set, 10kW, PU-753/M	G40744	30	X	
Gen Set, 5kW, MEP-802A TQG	G11966	Gen Set, 5kW, MEP-002A	J35813	470	X	
Gen Set, 10kW, MEP-803A TQG	G74711	Gen Set, 10kW, MEP-003A	J35825	199	X	
Gen Set: 15kW, MEP-804A/B TQG	G12170	Gen Set, 15kW, MEP-004A	J35835	36	X	
Gen Set: 30kW, MEP-805A/B TQG	G74575	Gen Set, 30kW, MEP-005A	J36109	15	X	
Gen Set, 60kW, MEP-806A/B TQG	G12034	Gen Set, 10kW, MEP-006A	J38301	7	X	
Gen Set, 15kW, PU-802 TQG	G53778	Gen Set, 15kW, PU-405	J35492	56	X	
Gen Set, 15kW, PU-802 TQG	G53778	Gen Set, 30kW, PU-406	J36383	45	X	
Gen Set, 30kW, PU-803/B/G	G35851	Gen Set, 30kW, PU-406	J36383	33	X	
Gen Set, 30kW, PU-803/B/G	G35851	Gen Set, 30kW, MEP-805A/B TQG	G74575	8	X	
Gen Set, 60kW, PU-805 TQG	G78306	Gen Set, 60kW, PU-650	J35629	15	X	
Power Supply: PP-6224/U	P40750	Power Supply: PP-2953/U	P38588	184	X	
Other Procurement						
Navigation Set, AN/PSN-11	N95862	Navigation Set, AN/PSN-13	N96248	200	X	
Night-vision Goggles, AN/PVS-7B	N05482	Night-vision Goggles, AN/PVS-5	N04456	5,267		X
Night-vision Goggles, AN/PVS-7B	N05482	Mono Night-vis Dev, AN/PVS-14	M79678	15,429	X	
Operating & Treatment Unit Dental Field	P19377	Dental Operating & Treatment Unit Field	F95601	223	X	
Tactical Vehicles						
Semitrailer Flatbed: Breakbulk/Cont Transporter 22-1/2 ton M871	S70027	Semitrailer Flatbed: Breakbulk/Cont Transporter Commercial 34T M872	S70159	11	X	
Semitrailer Tank: 5K gal Bulk Haul Self-load/Unload M967	S10059	Semitrailer Tank: 5K gal Fuel Dispensing M969	S73372	55	X	
Semitrailer Van: Repair Parts Storage 6 ton 4-wheel	S74832	Semitrailer Van: Supply 12-ton 4-wheel	S75175	14	X	

Table 7

USAR
Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2011 Qty	Deployable?	
					Yes	No
Trailer, Cargo, 3/4-ton, M101	W95537	Trailer, Cargo, 3/4-ton, High Mobility, M1101	T95992	24	X	
HMMWV Cargo/Trp Carrier, M998	T61494	HMMWV Shelter Carrier, M1097	T07679	4,710	X	
HMMWV Cargo/Trp Carrier, M998	T61494	HMMWV Cargo/Trp Carrier, M1038	T61562	129	X	
HMMWV Armt Carrier Armd M1025	T92242	HMMWV Armt Carrier Armd M1026 W/W	T92310	7	X	
HMMWV Cargo/Trp Carrier, M1038	T61562	HMMWV Shelter Carrier, Heavy, M1097	T07679	17	X	
HMMWV Shelter Carrier, Heavy, M1097	T07679	HMMWV, S250 Shelter Carrier, M1037	T07543	4	X	
LMTV 2.5-ton Cargo Truck, M1078	T60081	M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	447	X	
LMTV 2.5-ton Cargo Truck, M1078	T60081	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	81	X	
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	39	X	
MTV 5-ton Cargo Truck, M1083	T61908	M809/M939-series 5-ton Cargo Truck, M813/M923	X40794	1,356	X	
MTV 5-ton Cargo Truck, M1083	T61908	M809/M939-series 5-ton Cargo Truck, M813/M925 W/W	X40931	86	X	
MTV 5-ton Tractor Truck, M1088	T61239	Truck Tractor, M939/M809 Series 5-ton, M931/M818	X59326	775	X	
MTV 5-ton Tractor Truck, M1088	T61239	Truck Tractor, M939/M809 Series 5-ton, M932/M818 WW	X59463	90	X	
MTV 5-ton Wrecker, M1089 W/W	T94709	M809/M939-series 5-ton Wrecker, M816/M936 W/W	X63299	119	X	
MTV 5-ton Wrecker, M1089 W/W	T94709	HEMTT Wrecker M984 W/W	T63093	18	X	
MTV 5-ton Dump Truck, M1090	T64911	M809/M939-series 5-ton Dump Truck, M817/M930 W/W	X43845	34	X	
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	HEMTT Cargo Truck, w/Med Crane M985	T39586	5	X	
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	HEMTT Cargo Truck, w/Lt Crane, M977	T59278	8	X	
HEMTT Fuel Tanker, 2500gal, M978	T87243	HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	35	X	
HEMTT Fuel Tanker, 2500gal, M978	T87243	Tank & Pump Unit, Liquid Dispensing Trk-mtd	V12141	10	X	
Truck Tractor: MET M920 W/W	T61171	Truck Tractor: LET M916 W/W	T91656	20	X	
PLS Transporter, M1075	T40999	PLS Transporter, M1074	T41067	48	X	
Welding Shop Trailer Mtd	Y48323	Welding Shop Trailer Mtd, Oxy-Acet/Elec Arc	W48391	81	X	
Tracked & Wheeled Combat Systems						
Recovery Vehicle, FT Med M88A1	R50681	Recovery Vehicle, FT Hvy M88A2	R50885	3	X	
Weapons						
Machine Gun 5.56mm: M249	M09009	Machine Gun, 5.56mm, M249, Lt	M39263	152	X	
Machine Gun 5.56mm: M249	M09009	Machine Gun, 7.62mm, M240B	M92841	7	X	

Significant Major Item Shortages

NOTE: This table provides the RC highest priority (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	Command Post System and Integration (SICPS)	96	34	$201,202	$6,840,868	Standardized Integrated Command Post System (SICPS) with Force XXI Battle Command, Brigade and Below (FBCB2) continue to represent critical shortfalls for the Army Reserve.
2	Medium Tactical Vehicle	5,065	4,860	$350,000	$1,701,000,000	The Family of Medium Tactical Vehicles (FMTV) are replacement vehicles for our existing non-deployable 800/900 series vehicles. This represents a critical shortfall in our modernization program.
3	HMMWV Ambulance	288	63	$397,000	$25,011,000	The AR's HMMWV ambulance fleet is currently over 25 years old, and has exceeded their life expectancy by over 10 years. As a critical dual use piece of equipment - modernizing / upgrading our ambulance fleet is critical to our ability to support civil authorities.
4	Light Medium Tactical Truck Cargo	4,623	4,541	$350,000	$1,589,350,000	The FMTV are replacement vehicles for our existing non-deployable 800/900 series vehicles. This represents a critical shortfall in our modernization program.
5	Heavy Scraper	200	98	$312,065	$30,582,370	The scraper represents a critical piece of engineering equipment for our Horizontal Construction companies and is non-deployable in its currents configuration. An armored capable scraper is critical to the Army Reserve's ability to perform its Horizontal Construction mission.
6	Heavy Expanded Mobility Tactical Truck (HEMTT) Light Equipment Transporter (LET)	1,086	938	$171,278	$160,658,764	The HEMTT LET enables Army Reserve to support both our HD/DSCA missions as well as our OCO responsibilities, while at the same time supports our modernization and force structure alignment objectives.
7	Command Post of the Future (CPOF)	135	49	$325,293	$15,939,357	Integrated CPOF represents a critical modernization shortfall of the Army Reserve and impacts our ability to provide DSCA and our ability to seamlessly integrate into the Active force upon deployment.

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
8	Rough Terrain Container Handler (RTCH)	376	215	$893,023	$191,999,945	Rough Terrain Container Handlers are required to load/off-load miscellaneous cargo in support of all mission requirements to include DSCA and OCO deployments.
9	Distribution System Elec: 100kW	1,361	1,062	$14,637	$15,544,494	The 100kW Distribution System is critical to the Army Reserve's ability to connect to and operate its electrical grid. Shortages of this equipment put missions at risk due to electricity failures.
10	Tractor Line Haul M915	2,477	169	$171,278	$28,945,982	The M915A5 Tractor Line Haul is the replacement for the older non-deployable M915s that are still resident with the Army Reserve fleet.

Chapter 3
United States Marine Corps Reserve

I. Marine Corps Overview

The Marine Corps has long provided the Nation with a force adept at rapidly and effectively solving complex, multifaceted, and seemingly intractable security challenges—so much so that "Send in the Marines" connotes both a demand for action and a presumption of success. While the general public may not be conversant with what exactly the Marine Corps is or does, our fellow citizens display an intuitive understanding that in times of trouble the Marines stand ready to do whatever has to be done. In recent years, their confidence has been reinforced by the performance of Marines in toppling the regime in Iraq, eradicating the ensuing endemic violence within that country's Al Anbar province, and in numerous humanitarian assistance operations worldwide. This flexibility and dependability has been captured in the expression, "No better friend, and no worse enemy." While Marine Corps forces may perform a variety of missions across the range of military operations, two stand at the forefront of what we do.

First, as part of the naval team, we ***assure littoral access*** by bridging the difficult seam between operations at sea and on land. This is accomplished through a combination of activities ranging from military engagement, crisis response, and power projection (both soft and hard). This capability contributes to overcoming diplomatic, geographic, and military challenges to access and assists the Nation in its strategic objectives of preventing conflict, protecting national interests, assuring access to engage partners, and defeating aggression, when necessary.

Second, we ***respond to crisis***, and at the right end of that response spectrum, fight what have historically been called *"small wars."* Responding to crisis—whether humanitarian assistance at one end of the spectrum or small wars at the other—has traditionally required a high degree of adaptability along with versatile, comprehensive skills. We have a long track record of success spanning recently from Al Anbar province, to the Barbary Wars and suppression of the slave trade in the early 19th century. These are complex problems in which purely military solutions will not suffice—because the fundamental causes of the conflict are often a complicated combination of security, economic, political, and social issues.

What assured littoral access and responding to crisis have in common is that they require forces that are strategically mobile, operationally flexible, and tactically proficient. These three defining traits allow the Marine Corps to meet this standard: our naval character, our high state of mental and materiel readiness, and an exceptional degree of military professionalism. These capabilities and traits ensure that the Marine Corps can effectively support joint force actions to "prevail in today's wars; … prevent and deter threats against the United States, its interests, and our allies and partners; and prepare to defend the United States in a wide range of contingencies against state and non-state actors."[1]

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[1] *National Security Strategy*, May 2010, pg. 14.

A. Marine Corps Planning Guidance

1. Strategic Concept of the Marine Corps

As a maritime nation with global interests, the United States must be capable of extending its control through influence and power via the sea. Marines operate in the domain of uncertainty and provide the necessary and critical transition of control at the point that history repeatedly demonstrates requires special and adaptable skills—at the interface between the sea, land, and air domains. The Marine Corps is organized, trained, and equipped to operate at and from the sea as part of the naval team to "*engage*, *respond*, and *project*." The Service's general purpose and highly adaptable capabilities also contribute to other missions, especially "small wars." To meet the Nation's strategic needs, the Marine Corps possesses the ability to *engage* with a wide set of partners in order to build capability, forge solid relationships across cultural barriers, and promote diplomatic access. At the same time, Marine Corps forces remain prepared to *respond* to crises—either natural or man-made. The Marine Corps will also be able to project power—either "soft" or "hard" as the situation requires—at and from the sea.

As highlighted in the National Security Strategy, engagement "underpin[s] our commitment to an international order based upon rights and responsibilities." Engagement is conducted at the seam between diplomacy and defense. Specifically, the ability of Marine forces to engage forward is critical in that it allows us to forge the partnerships that promote diplomatic access; reassure allies and friends; facilitate building partner capacity and a collective approach to maintaining the security and stability necessary to maintain a peaceful global system of commerce and trade. Both our engagement and response activities are enhanced by our close partnerships with special operations forces and other government agencies to achieve a more whole-of-government approach. In response to manifested threats, our ability to *project* power complements our naval and national strike power projection capabilities with a capability that can not only punish an adversary, but can validly impose our will by seizing or denying something that they hold as critical. It allows us to successfully transition forces between maritime and land domains to support the rapid introduction of joint, other agency, multinational, or non-governmental resources.

2. Marine Corps Total Force Concept

As a fully integrated Total Force Marine Corps, Active Component (AC) and Reserve Component (RC) Marines prepare side-by-side for employment across the full spectrum of conflict. The RC is neither a repository for low-demand former AC capabilities, nor is it the keeper of niche capabilities. RC units and Marines "mirror-image"' the AC; thus are prepared to seamlessly integrate as necessary with the AC in support of core missions. By creating a Total Force shared identity and capability, the RC can prepare and provide Marines and units in an operational role to the Total Force or as strategic depth to the larger joint force.

B. Marine Corps Equipping Policy

The Marine Corps develops an Approved Acquisition Objective (AAO) for each new item of equipment by using an integrated system of dynamic processes that capitalizes on recent operational experiences to meet the emerging needs of Marine forces and the combatant commanders. These AAOs include equipment modernization plans and address all initial issue quantities and planned sustainment requirements for both the AC and RC.

The current Marine Corps equipping policy is a direct result of lessons learned since September 2001. To ensure adequate equipment support to current operations in Afghanistan, while maintaining a viable cost-effective strategy for force rotations, the Commandant directed that equipment required for operations in Afghanistan remain in theater as long as it is required and can be maintained. This policy has permitted the Marine Corps to focus on identifying, obtaining, and delivering the best equipment possible to forces in the combat theater, while substantially reducing equipment rotation costs. This policy has also permitted the Marine Corps to focus on obtaining the equipment required to generate future rotations, especially training deficiencies.

In addition, the Marine Corps practices horizontal fielding of new equipment across the Total Force. This means that, in most instances, new equipment is fielded to AC and RC units simultaneously. This enables RC training to maintain pace with that of the AC.

Due to the nature of its Total Force fielding strategies, the Marine Corps must carefully balance the need for assets in-theater with that of delivery of new and modernized equipment across the Total Force. Due to the impacts of current operations, the Marine Corps' current practice is to determine the fielding distribution and priority plan at time of delivery. This provides the Marine Corps with maximum flexibility in sourcing equipment for units preparing to rotate and for equipment requirements in-theater. This policy also reduces costs associated with unnecessary equipment redistribution. This policy applies across the Total Force and not just to the RC.

C. Plan to Fill Mobilization Shortages in the RC

The warfighting equipment requirement for Marine Corps units is set forth in the table of organization and equipment (TO&E). When not activated, Reserve units maintain a portion of the full TO&E; this is called the unit's Training Allowance (T/A). The T/As represent the equipment levels needed for Reserve units to achieve a fully trained status in a pre-activation environment. Unit commanders determine their T/A based on pre-activation training requirements and the time available for training, as well as other considerations, such as Reserve Training Center (RTC) capacity and the number of maintainers at each unit location. Maintaining only a T/A requires enterprise-level support to ensure that the TO&E–T/A delta is sourced in the event of unit activation. Items of equipment procured for the RC that exceed their T/A are to be maintained "in-stores" and managed by Marine Corps Logistics Command. Additionally, in-theater assets and pre-positioned equipment can be used to satisfy the TO&E–T/A delta for activated units. Due to current operations, this use of in-theater and pre-positioned assets is the same practice used to source Marine Corps AC unit equipment shortfalls and is commonly referred to as "global sourcing."

Table 1 reflects this total wartime requirement and the assets that are projected to be on-hand within the RC to support its T/A. *Table 1* provides an accurate assessment as to what the delta between the equipment on-hand and the wartime requirement. What it is unable to provide is an assessment of the shortfall between the projected on-hand and the T/A. The Marine Corps has calculated this value to be approximately $354M as opposed to the $820M delta that exists between the projected on-hand and the wartime requirement. It is important to note that the majority of these shortfalls are not due to lack of funding. Rather, they are the result of re-prioritized equipment deliveries and the removal of in-stores items to support current operations in accordance with the Marine Corps' overall equipping strategy.

D. Initiatives Affecting RC Equipment

Per DoD Directive 1200.17, *Managing the Reserve Components as an Operational Force*, the Marine Corps will "manage the RC as an operational force to provide operational capabilities while maintaining strategic depth to meet U.S. military requirements across the full spectrum of conflict." In doing so, the RC will provide operational tempo relief for the AC, support predictable routine deployments to include overseas contingency (OCO) operations, and continue to provide strategic depth to satisfy combatant commander requirements. By institutionalizing the RC role as an operational force, equipment initiatives will need to be adjusted to account for the increased frequency of utilization of RC equipment and its ultimate replacement.

In addition, as we continue to battle an intelligent, determined enemy in the Middle East and South-Central Asia, and remain vigilant in shaping our Corps for future wars, the Marine Corps has developed many structure-related initiatives that affect the equipping of the force. Currently, these initiatives rest solely within the aviation community, as the Marine Corps restructures its aviation force. Currently, there are no ground force structure actions that are scheduled to take effect between FY 2011 and FY 2013 other than Base Realignment and Closure (BRAC) relocations.

The 4th Marine Aircraft Wing (MAW) continues to participate in the Total Force Marine Aviation Plan. This consolidated action plan provides a graphic overview of Marine Aviation Total Force organization, aviation readiness, and planned organizational, aircraft, and equipment transitions over the next 10 years. The Aviation Plan is revised annually to update Marine Aviation policy and program changes. During FY 2010, VMU-4 (an RC unmanned aerial vehicle [UAV]) squadron was established at Yuma, AZ. Phase two of this stand up calls for the establishment of a second VMU-4 site at Fort Hood, TX during FY 2011. The Aviation Plan also calls for the RC transition from the KC-130T to the KC-130J beginning in 2014 and lasting beyond the Future Years Defense Program (FYDP). Lastly, the two RC CH-46 squadrons will begin their transition to the MV-22 in FY 2013. HMM-764 will begin transition in FY 2013 followed by HMM-774, which will begin in FY 2016.

To maximize the ability of our Reserve Marines to prepare for combat while in a non-activated status, unit commanders have sought out many alternative training methods. Working with the Marine Corps Program Manager for Training Systems the RC has been able to improve the effectiveness of our warfighting training through the procurement of the following training systems:

- Indoor Simulated Marksmanship Trainer–Enhanced

- Medium Tactical Vehicle Replacement–Operator Driving Simulator (MTVR-ODS)

- Virtual Combat Convoy Trainer–Marine (VCCT-M)

- Reconfigurable Vehicle Simulator–Marine

- Amphibious Assault Vehicle (AAV) Turret Trainer

- Combat Vehicle Training System (CVTS)

- CVTS-Advanced Gunnery Training System–LAV/M1A1/AAV

- Tactical Decision Simulation and Combat Decision Ranges

- Learning Resource Center/Deployable Learning Resource Center

- Deployable Virtual Training Environment–Reserves (DVTE-R).

The National Guard and Reserve Appropriation (NGREA) and supplemental appropriations have been an integral part of the funding for these time and resource-saving initiatives and have had direct positive effect on unit readiness.

E. Plan to Achieve Full Compatibility between AC and RC

As stated earlier, the Marine Corps' equipping policy is to horizontally field or integrate new weapon systems and equipment to ensure compatibility and the highest degree of interoperability between the AC and RC. This policy was further reinforced in the Commandant's *Marine Corps Vision and Strategy 2025* and the *Marine Corps Operating Concepts*, which identify that a "ready and sustainable Reserve" is required to produce sufficient numbers of common/interchangeable Total Force modules to increase the number of Marine air-ground task forces (MAGTFs) that the Marine Corps can generate that are fully-capable across the range of military operations to meet combatant commander requirements. This horizontal fielding policy results in common/interchangeable force modules, whether they come from the AC or RC.

Accomplishing this requires continued Total Force emphasis on modernization and equipment upgrades to ensure the Marine Corps Reserve (MCR) retains its warfighting capabilities as part of the Marine Corps Total Force and provides the Commandant of the Marine Corps and National Command Authority with increased flexibility in meeting current and emerging requirements.

II. Marine Corps Reserve Overview

A. Current Status of the Marine Corps Reserve

1. General Overview

The Selected Marine Corps Reserve (SMCR) is authorized to be a force of 39,600 individuals in entry-level programs, in the Active Reserve Program, in individual mobilization augmentee billets, and in units spread across 183 sites in 48 states, the District of Columbia, and Puerto Rico. Command and control of these forces is exercised primarily from Marine Forces Reserve (MARFORRES) Headquarters in New Orleans, Louisiana. MARFORRES is comprised of SMCR units that are built to be interchangeable with AC units belonging to the elements of the MAGTF.

> **Top MCR Equipping Challenges**
>
> - Completing modernization of Light Armored Vehicle (LAV) Family
>
> - Accelerating fielding of KC-130J aircraft to reduce AC/RC compatibility challenges
>
> - Rapidly fielding the Logistics Vehicle System Replacement (LVSR)

As of the end of FY 2010, over 60,000 Reserve Marines have been mobilized in support of OCO and various theater security cooperation missions. These Marines come from all ranks and military specialties, provide invaluable services in these operations, and serve as a "shock-absorber" to the Total Force Marine Corps. During FY 2011, approximately 5,800 SMCR unit Marines and Sailors will be activated and deployed as a part of Marine Corps force generation requirements, and an additional 1,500 Individual Ready Reserve Marines will serve as individual augments on Marine Corps and other higher-headquarter and joint staffs.

The Marine Corps has used rotational models (e.g., unit deployment program) for several decades. Like the Navy, the size of the Marine Corps AC has long been determined by "rotational base" requirements, and not by "warfighting" requirements. However, the size of the MCR has been determined by the "surge" contribution required in support of "warfighting." In recent years, however, the RC has been included in the Marine Corps' rotational base. To meet a 1:5 deployment-to-dwell ratio goal and force generation requirements, the Marine Corps developed the MARFORRES Force Generation Model. This model is a planning tool for the Marine Corps to source RC forces and for SMCR unit commanders to: plan and meet personnel, materiel, and training readiness milestones; coordinate pre-activation training and other activities; and to allow individual Marines and Sailors and their families and employers to better manage their expectations with regard to preparing for activation and deployment.

While Marine Corps operations in Iraq concluded in 2010, the demand for access to and utilization of the RC is not anticipated to decrease; but rather, is anticipated to increase with combatant commander theater-security-cooperation requirements. Additionally, the RC will continue to provide units and individuals to support Marine Corps efforts in Afghanistan for the next several years.

To maintain this growing commitment to providing RC operational forces in support of current operations and future theater-security-cooperation requirements, the Commander of Marine Forces Reserve has identified three top equipping challenges. All three of these challenges center on

accelerated modernization of key programs. All three of these programs are also highlighted in *Table 8*.

The Light Armored Vehicle (LAV) family is currently undergoing modernization to an improved standard. Due to operational commitments, the Marine Corps has had to prioritize all A2 standard LAVs distribution towards combat operations and units preparing to rotate in theater. Unfortunately, this also came at a time when MCR was expanding its Light Armored Reconnaissance (LAR) Battalion from four companies to six. Because the LAV family of vehicles is a critical low density system (only one battalion in the RC), the MCR has decided to make its accelerated modernization/fielding a priority. Currently 122 of 164 vehicles have been modernized or procured at the new standard. The Marine Corps will continue to prioritize LAVs towards operational commitments, and the remaining RC LAVs will be fielded as LAVs return from theater or NGREA funding becomes available.

The second modernization program creating a challenge is the transition from the KC-130T aircraft to the KC-130J. The KC-130J is a fundamentally different aircraft from the KC-130T, The AC has completed the transition to the KC-130J leaving 28 KC-130T aircraft in the MCR. Due to the complexities of supporting dual KC-130 models in combat operations, current Marine Corp policies prohibit the employment of the legacy aircraft in the current contingency. Budget challenges resulting from competing aircraft procurement priorities within the Navy and Marine Corps have resulted in a delay of 4 years in the fielding of the KC-130J to the MCR. Fielding is scheduled to begin in FY 2014 with the first three aircraft being delivered. Currently there are only nine aircraft planned for the current FYDP and only 17 total aircraft between now and 2020. Compatibility differences between the KC-130J and KC-130T create significant challenges in training, manning, and logistical support of the KC-130T. Without accelerated fielding, the Marine Corps will have to continue to maintain two training pipelines, two sets of logistics, and continue to negate AC /RC compatibility issues for the foreseeable future.

The third modernization challenge is that of the fielding of the Logistics Vehicle System Replacement (LVSR). Our internal logistical capability is a cornerstone to how Marine Corps units operate. Similar to the issues with maintaining a dual KC-130 fleet, a dual Logistics Vehicle System (LVS) family requires additional considerations when planning for training and maintenance. Due to the geographic dispersed nature of the RC, it will be critical to ensure the fielding occurs in a way so that units are not left with a mixed fleet. This will maximize AC/RC compatibility and ensure RC Marines are familiar and trained on the logistics vehicles that they would fall in on during mobilization. Currently, only one of three LVSR variants is in fielding, with the remaining two expected to be at full rate production by FY 2012. Currently the MCR has been fielded or is funded for 73 of 176 vehicles to meet its training allowance requirements.

2. Status of Equipment

Current operations continue to show the value in the Marine Corps' use of horizontal "Total Force" fielding. This allows our Reserve Marines to train on the equipment they are using in theater and improves the seamless integration of the RC in support of the AC. Both the RC and the AC face two primary equipping challenges:

- Outfitting units with the latest generation of combat equipment provided to U.S. forces in each theater

- Providing units with the "right amount" of equipment to effectively train their Marines in a pre-activation environment.

Although the latter of these problems is much more relevant to the RC due to the limited maintenance and storage capacity at the RTCs, the Marine Corps has alleviated many of these issues with continued reliance on training simulators and through the use of training allowances at the RTCs.

NGREA has been a force multiplier not only for the RC, but also for the Marine Corps Total Force as well. By giving the RC the flexibility to purchase or accelerate the fielding of mission essential items directly impacting its ability to train for current conflicts, the MCR has been able to ensure its forces that are augmenting and reinforcing the AC are as proficient as their AC counterparts. It also relieves some of the pressure on our Total Force procurement pipelines as they continue to program resources to meet the horizontal fielding objectives.

NGREA funding from 2009 and 2010 is being used to purchase much needed LAVs, ruggedized laptops for command and control, and upgrades to various aircraft, such as the Bright Star Forward-looking Infrared (FLIR) and aircraft survivability upgrades. The MCR was able to nearly buyout its T/A for the LVSR-Cargo variant and is also making purchases of various digital mapping equipment, tactical remote sensors, an Air Traffic Control simulation system, and various human intelligence gathering equipment needed to ensure the MCR remains proficient in the current operating environment.

We intend to use any future NGREA we receive to continue to address emerging combat item shortfalls that are having an impact on our combat training and deployability, as well as invest in accelerated fielding of new equipment. Accelerated fielding enables the MCR to meet the challenges associated with its geographic dispersion. At a major AC training facility, adjacent units can rely on each other to conduct new equipment training. The MCR geographic dispersion prevents this in the RC. Our current initiative of using NGREA to accelerate the fielding of upgraded LAVs to 4th LAR companies around the country is a good example of how this accelerated fielding benefits the MCR.

a. Equipment On-hand

The equipment on-hand outlined in *Table 1*, reflects the items expected to be on-hand in the MCR beginning in FY 2012. It does not capture the equipment that is available in-stores or is available for global sourcing to meet the full wartime requirement and meet the delta between T/E and the T/A. The majority of the $820M delta between on-hand and wartime requirement is not a deficiency that has resulted from a lack of procurement funding. Rather it is a result of the need for re-prioritizing of fielding to meet operational requirements. The Marine Corps has ensured that the RC maintains its ability to train through its use of a training allowance that is not routinely tapped into to meet these operational requirements. The items outlined in *Table 8* reflect the modernization programs that will directly enhance the RC's current training allowance.

As a part of its continued commitment to ensuring proper resource allocation and distribution, MARFORRES is currently executing an extensive equipment accountability campaign designed to give it the highest level of accuracy and accountability for all of its assets. The second phase of this campaign will include a complete review of all individual unit T/As. As previously stated, the T/A is the portion of a Reserve unit's wartime requirement that remains on-hand at the RTC to accommodate training. As operations, tactics, and techniques continue to evolve during the current conflicts, so should our level of on-hand equipment to accommodate these changes. The T/A review will also encompass the changes required to support recent BRAC realignments and other unit relocations.

b. Average Age of Major Items of Equipment

Table 2 provides the average age of selected major equipment items. The average age of MCR equipment is consistent with the AC. The majority of ground combat systems that are at the end of their life cycle either have new equipment fielding already associated with them or have programs of record that are working towards a replacement. The LAV family is being upgraded to a new A2 standard. One of the three LVSR variants is already being fielded while the remaining two are in the final phases of acquisition. A replacement to the P-19 firefighting capability is in the early phases of program development.

c. Current Active-Reserve Equipment Compatibility

Although current overall AC and RC equipment compatibility is satisfactory, complete compatibility is difficult to achieve for several reasons:

- Continuing high equipment demand for force generation training support

- Attrition of equipment through wear, damage, and destruction

- Procurement over the past several years of small quantities of new non-Program-of-Record equipment through the Urgent Universal Need Statement process to meet specific OCO mission needs

- Application of funds against ever-evolving higher priority requirements.

In most cases, the issue is not overall equipment incompatibility, but rather the fiscal constraints in fielding new equipment systems quickly enough to maximize AC-RC compatibility. The MCR continues to use NGREA funding to improve compatibility in new equipment programs where fielding can be accelerated. The positive impact of NGREA on improving AC and RC compatibility cannot be overstated, as outlined later in this chapter.

d. Maintenance Issues

Equipment maintenance remains a top priority for MARFORRES. Sufficient funding must be programmed to sustain the materiel readiness and capability of legacy systems and new acquisitions. These systems are currently maintained at a requisite level of readiness due to the hard work of skilled Marines and the assistance of Congress in providing resources for maintenance and spare parts. Programs and initiatives that help maintain and improve the materiel readiness of the systems in the RC are:

- The Marine Corps Depot Maintenance Program, which enhances equipment readiness for both the AC and RC. MARFORRES continues to be proactive in articulating its depot maintenance requirements through the annual Marine Corps Depot Maintenance Process. However, as more equipment returns from overseas operations, MARFORRES will be competing against a larger pool of depot requirements. The impact of this over the FYDP is not known, but based on current funding levels, one-for-one exchanges from the depot may not always be available and may result in a delay in receiving a like item.

- Maintenance Initiatives: MARFORRES continues to exercise better business practices through competitive outsourcing of maintenance requirements. MARFORRES has implemented a mobile preventive maintenance capability designed to prolong the service life of our equipment. This program, which is supported by Marine Corps Logistics Command, targets engineer and motor transport equipment. Additionally, MARFORRES has contracted for mobile Corrosion Prevention and Control teams to repair equipment and apply anti-corrosion treatments.

During its FY 2011 Program Review, the Marine Corps made an increased commitment to RC equipment readiness by redistributing additional maintenance dollars to the MCR. These additional dollars establish the baseline necessary to support the increased maintenance actions that have resulted from the current operational tempo.

e. Modernization Programs

The Marine Corps continues to establish modernization programs that keep pace with the ever changing character of the current operations. The MCR has utilized various funding sources to help in execution of the programs and to continue filling equipment shortfalls.

- Training and Simulators: The Marine Corps Reserve continues to strive to incorporate the latest technological innovations to create cost-effective training and education opportunities for Reserve Marines increasing their ability to perform at the same level as their AC counterparts. Fielding modern, state-of-the-art training systems is part of this effort. Through the use of NGREA, the Marine Corps has procured the MTVR-ODS, VCCT-M, DVTE-R, and other training systems. The Marine Corps continues to evaluate new training and simulation technologies to identify cost effective training options.

- Combat Equipment Modernization: The Marine Corps also has various combat equipment modernization programs that are providing the MCR with the latest generation of warfighting capability. These programs include the LVSR, the development of the Joint Light Tactical Vehicle, the A2 upgrade to the LAV family, and the procurement of the lightweight 155mm howitzer. The majority of the Marine Corps' modernization programs are already in the fielding phase or within the final phases of acquisition.

- Aviation Modernization: As previously stated, the MCR is also included in the Marine Corps Aviation Plan. During this FYDP, Reserve squadrons will begin transition from the KC-130T to the KC-130J, and CH-46 squadrons will transition from the CH-46 to the MV-22. Additionally, the MCR has used NGREA funding to provide upgraded capabilities to existing aircraft. We have invested in Bright Star FLIRs, F/A-18 Lightning Targeting Pods, and survivability upgrades for the UC-35s. Baseline funding for these

types of upgrades have recently been prioritized towards equipment closest to the current fight. NGREA has allowed the MCR fleet to maintain pace.

f. Overall Equipment Readiness

The overall equipment readiness of SMCR units remains above required readiness reporting levels. MCR Supply readiness ratings can be misleading if interpreted solely by themselves. While RC units are required to report readiness against a complete TO&E, the Marine Corps maintains only a T/A within the RC, and continues to plan for RC units to fall-in on pre-positioned or in-theater equipment as a part of its global sourcing strategy.

B. Changes Since Last NGRER

Since the last NGRER, MARFORRES has transitioned its combat operations from a mix of OEF and OIF support to OEF exclusively. The MCR continues to support these operations and falls-in on equipment already in-theater as a part of the force rotation process.

Additionally, MARFORRES has conducted an extensive equipment accountability campaign designed to validate on-hand equipment numbers and establish current T/As. The results of this campaign are currently being evaluated and commanders' requested T/A adjustments are being validated.

C. Future Years Program (FY 2012–FY 2014)

1. Equipment Requirements

The Marine Corps' policies towards Total Force equipping have allowed the MCR to remain on equal footing with regards to fielding of new equipment and equipment modernization. MCR equipment requirements are determined by Marine Corps Combat Development Command, and a single acquisition objective for the Service is planned and programmed. In most cases, the decision of where to distribute purchased equipment (for both the AC and RC) does not occur until after the equipment is procured. This allows the Marine Corps to remain flexible in determining fielding priorities that impact training and combat operations. The MCR competes equally alongside the AC.

2. Anticipated New Equipment Procurements

a. MV-22 Osprey

The MV-22 is a multipurpose, tilt-rotor, vertical and/or short takeoff and landing aircraft developed to replace the current fleet of CH-46E helicopters. This aircraft has the capability of participating in amphibious and land assault operations, providing medium cargo lift, and performing aircraft and personnel recovery. The MV-22 is capable of carrying 24 combat-equipped Marines or a 10,000 pound internal load and has a 2,100 nautical mile range with a single aerial refueling. Under the current Marine Corps Aviation Plan, the RC will transition to the MV-22 between FY 2013 and FY 2017. The first squadron of twelve aircraft is scheduled for FY 2013 with subsequent squadrons beginning in FY 2016. Ensuring the RC transition to the MV-22 remains on schedule is an important goal for MARFORRES.

b. KC-130J

The KC-130J is a multi-role, multi-mission tactical tanker/transport aircraft developed to replace the KC-130F/R/T models. The KC-130J has increased range and speed, lower cost per flight hour, better fuel efficiency, improved reliability and better maintainability. The AC has completed the transition to the KC-130J leaving 28 KC-130T aircraft in the MCR. Current policies prohibit the employment of the legacy aircraft in the current contingency. Budget challenges resulting from competing APN appropriation priorities within the Navy and Marine Corps have resulted in a delay of 4 years in the fielding of the KC-130J to the MCR. Fielding is scheduled to begin in FY 2014 with the first three aircraft being delivered. Currently, only nine aircraft are planned for the current FYDP and only 17 total aircraft between now and 2020. Compatibility differences between the KC-130J and KC-130T are creating significant challenges in training, manning, and logistical support of the KC-130T. Accelerating the RC transition to the KC-130J is a priority for MARFORRES. It is also the most expensive equipment shortfall, costing $2B.

c. Joint Light Tactical Vehicle (JLTV)

The JLTV is a joint Army and Marine Corps multinational program for a family of light tactical vehicles and companion trailers. JLTV objectives include: increased protection and performance; minimizing ownership costs by maximizing commonality and reliability; increasing fuel efficiency; and executing effective competition throughout the program development. The JLTV Family of Vehicles includes six configurations and companion trailers in three payload categories for the Army and two payload categories for the Marine Corps. Commonality of components, maintenance procedures, and training between all variants will minimize total ownership costs. The JLTV Family of Vehicles will be capable of operating across a broad spectrum of terrain and weather conditions. The Draft Capabilities Development Document identifies required capabilities for the next generation of light tactical vehicles needed to support joint forces across the full range of military operations and provide a vital force enabler, multiplier, and extender. The Marine Corps intends to replace a portion of the high-mobility multipurpose wheeled vehicle (HMMWV) fleet with JLTVs as part of the ground transportation modernization effort, but it is not meant to be a direct replacement for existing vehicles. JLTV will give the warfighter increased protection through the use of scalable armor solutions, while returning the payload currently traded by existing tactical vehicles for added armor protection. Using a system of systems approach, JLTV will increase warfighter maneuver capacity by providing protected mobility on the modern battlefield. JLTV performance characteristics will exceed the armored HMMWV and will return expeditionary mobility to the joint services. The JLTV is scheduled for fielding to AC and RC forces beginning in FY 2016.

d. Common Aviation Command and Control System (CAC2S)

CAC2S is a modernization effort to replace the existing aviation command and control equipment of the Marine air command and control system (MACCS) and to provide the aviation combat element with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. CAC2S will accomplish the MACCS missions with a suite of operationally scalable modules to support the MAGTF, joint, and coalition forces. CAC2S integrates the functions of aviation command and control into an interoperable system that will support the core competencies of all Marine Corps' warfighting

concepts. CAC2S, in conjunction with MACCS organic sensors and weapon systems, supports the tenets of expeditionary maneuver warfare and fosters joint interoperability. CAC2S capabilities will be fielded in two phases. For Phase I, CAC2S will be fielded to MARFORRES/4th MAW/MASS-6 (Chicopee, MA) beginning in FY 2011. Phase I fielding will complete in FY 2013 with MTACS-48 (Glenview, IL). Phase II of the program will provide increased common operating picture capabilities and is currently under acquisition development. No timeline has been established for Phase II CAC2S fielding.

e. Logistics Vehicle System Replacement

The LVSR is the Marine Corps replacement to the original LVS, which is aged significantly and now comes with high maintenance costs. The LVSR provides the following enhanced capabilities relative to the original LVS:

- Improved survivability—factory-installed armor is integrated into the vehicle's design

- Improved mobility—independent suspension system enhances off-road capabilities

- In-cab vehicle diagnostics—effortless monitoring of engine, transmission, brakes and other critical components

- Increased performance—an advanced-design 600 hp engine allows for speeds up to 65 mph.

There are three basic variants used by the RC. The Cargo variant, which is already in production, provides the capability to long-haul supplies and smaller equipment. The RC has used prior NGREA funding to meet a portion of its Cargo-variant requirement of 130 vehicles. To date 43 vehicles have been purchased with NGREA, and an additional 30 are planned for in baseline funding this FYDP. To meet its full T/A, the RC will need an additional 57 vehicles at a cost of $22M.The Tractor variant, which provides the capability to move larger end items, is nearing its final production milestones. The RC will require 35 of these variants to replace the current heavy-haul LVS versions. The anticipated cost to procure these vehicles is just under $16M. The Wrecker variant, which is also nearing its final production milestones, is required to provide organic maintenance and recovery capabilities with regards to the other two variants. The RC will require 11 of this variant at a cost of $5.5M. Once in full-rate production, the first of these last two variants will be prioritized towards current operations. It is not yet known when the RC will begin to receive these variants.

The LVSR is a critical component to future logistics capability and will become the only long haul heavy lift capability in the Marine Corps. Without it, the RC risks not having the capability to provide distributed logistics across the battlespace.

3. Anticipated Transfers from AC to RC

No major equipment transfers from AC to RC are anticipated for FY 2012.

4. Anticipated Withdrawals from RC Inventory

No major equipment withdrawals from the RC inventory are anticipated for the period FY 2012 to FY 2014.

5. Equipment Shortages and Modernization Shortfalls at the End of FY 2014

Table 1 addresses the MCR wartime requirement and outlines the major item shortfalls that are anticipated to exist at the end of FY 2014. It should once again be noted that *Table 1* reflects the wartime requirement and not the on-hand training allowance requirement. Commander Marine Forces Reserve has identified equipment modernization to be his top equipping challenge. The RC's 10 highest priority unfunded equipment and modernization shortfalls affecting Reserve unit T/As are listed in *Table 8*.

D. Summary

Over the last three years, the Marine Corps and its Reserve have improved Total Force integration and expeditionary capability. Through effective use of procurement funds, the Marine Corps has continued to outfit its RC to be an operationally effective force, capable of augmenting and support the AC whenever and wherever called. While there are challenges before us, such as modernizing the RC aircraft wing with KC-130Js and quickly fielding new ground combat equipment, or developing technologies that allow better communication and logistics support; the Marine Corps and its Reserve stand ready to protect and defend our Nation. The Marine Corps' "Total Force" fielding concept continues to provide the latest generation of combat equipment at the same rate provided to the AC and supports our highest priority, which remains taking care of our greatest asset—the outstanding men and women who serve in a Marine Corps uniform.

USMCR
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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Aircraft							
Helicopter, Utility, UH-1N	UH-1N	$7,061,681	9	9	9	9	9
Helicopter, Cargo, CH-46E	CH-46E	$14,983,188	26	26	26	26	26
Helicopter, Cargo, CH-53E	CH-53E	$37,658,528	6	6	6	6	6
Helicopter, Attack, AH-1W	AH-1W	$18,935,714	18	18	18	18	18
Aircraft, Fighter/Attack, F/A-18A	F/A-18A	$52,436,016	1	1	1	1	1
Aircraft, Fighter/Attack, F/A-18A++	F/A-18A++	$54,436,016	14	14	14	14	12
Aircraft, Fighter, F-5F	F-5F	$14,830,970	1	1	1	1	1
Aircraft, Fighter, F-5N	F-5N	$702,466	11	11	11	11	11
Aircraft, Refueling/Cargo, KC-130T	KC-	$45,480,270	28	28	28	25	25
Aircraft, Refueling/Cargo, KC-130J	KC-130J	$80,720,000	0	0	0	3	3
Aircraft, Utility/Cargo, UC-12B	UC-12B	$4,856,577	2	2	2	2	2
Aircraft, Utility/Cargo, UC-35C/D	UC-35	$8,179,661	5	5	5	5	5
Communications & Electronics							
Theater Battle Management Core Sys AN/TYY-2	A0013	$277,468	1	1	1	1	1
Direct Air Support Central, Airborne System (DASC, AS)	A0020	$500,000	2	2	2	2	2
Communications Data Link System, TYQ-101A	A0021	$324,501	1	1	1	1	2
Communications Platform, Air Defense (ADCP)	A0025	$907,000	3	3	3	3	3
Radio Set, AN/MRC-148	A0067	$53,234	151	151	151	151	192
Radio Set, Tactical Long Haul Digital Link-11, AN/GRC-256	A0068	$20,000	4	4	4	4	4
Radio Set, AN/VRC-110, 50W	A0097	$14,000	333	333	333	333	691
Improved Position and Azimuth Determining System (IPADS)	A0116	$150,000	10	10	10	10	10
Satellite Comm Terminal, Phoenix AN/TSC-156	A0122	$1,813,000	3	3	3	3	3
Remote Subscriber Access Module (RSAM) AN/TTC-63	A0124	$69,886	123	123	123	123	125
Deployable End Office Suite	A0125	$461,217	32	32	32	32	34
Radio System, AN/VRC-103(V)2	A0126	$39,000	101	101	101	101	573
Radio Set, AN/PRC-152 (V3)	A0129	$4,800	820	820	820	820	1,422
Deployable Integrated Transport Suite (DITS)	A0132	$302,104	19	19	19	19	19
RF 300M-HV019 Radio Set, Single Veh Adapter	A0135	$4,320	0	0	0	0	225
Tactical Exploitation Group - Remote Workstation	A0138	$76,431	0	0	0	0	3
Radio Set, AN/TRC-209	A0139	$47,828	73	73	73	73	91
Antenna Comm, Trailer-mtd AS-4429D	A0149	$495,000	1	1	1	1	1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Radio Set, AN/MRC-142C	A0153	$224,839	28	28	28	28	61
DDS-R/M Comm Security Module (CSM)	A0173	$44,550	30	30	30	30	104
DDS-R/M LAN Service Module (LSM)	A0174	$92,330	30	30	30	30	104
DDS-R/M Configuration Module (CM) Laptop	A0175	$3,000	13	13	13	13	126
DDS-R/M LAN Extension Module ON-704/TYC	A0176	$75,000	84	84	84	84	310
DDS-R/M App Server Module, AN/TYQ-147	A0177	$99,564	21	21	21	21	104
AN/TYQ-145 Beyond Line of Sight Gateway	A0180	$61,230	2	2	2	2	4
DDS-R/M Data Storage Module (DSM)	A0197	$69,885	21	21	21	21	74
Support Wide Area Network (SWAN) D (V1)	A0234	$80,000	24	24	24	24	26
SWAN D (V2)	A0241	$90,000	7	7	7	7	9
Satellite Communication Subsystem	A0242	$295,000	10	10	10	10	10
Network Management System	A0244	$105,000	7	7	7	7	7
Combat Operations Center, AN/TSQ-239(V)3	A0254	$1,848,286	9	9	9	9	9
Combat Operations Center, AN/TSQ-239(V)4	A0255	$1,372,700	28	28	28	28	30
Radio Set, AN/VRC-104(V)5	A0266	$50,755	16	16	16	16	70
Combat Operations Center	A0271	$5,100,000	2	2	2	2	3
Radio Set, Vehicular, DVA, AN/VRC-110	A0273	$14,600	503	503	503	503	1,273
Mounted Digital Automated Communications Terminal (MDACT), AN/GSC-68(V)1	A0425	$16,940	39	39	39	39	384
Digital Techl Control (DTC), Facility, AN/TSQ-227	A0499	$1,213,000	5	5	5	5	6
Lightweight Multiband Satellite Terminal (LMST) Hub, AN/USC-65(V)1	A0806	$1,500,000	1	1	1	1	1
LMST Mini-Hub AN/USC-65(V)2	A0807	$900,000	1	1	1	1	1
Interrogator Set, AN/UPX-37	A0880	$127,325	6	6	6	6	6
Joint Tactical Information Distribution System (JTIDS), AN/URC-107(V)10	A0882	$683,000	4	4	4	4	4
Joint Enhanced Core Comm Sys (JECCS)	A0886	$2,543,653	0	0	0	0	1
Intelligence Operations Workstation (IOW)	A0932	$10,000	101	101	101	101	128
EPLRS Network Manager, AN/TSQ-158A	A1225	$5,889	17	17	17	17	22
Defense Advanced GPS Receiver (DAGR)	A1260	$3,581	1,300	1,300	1,300	1,300	1,307
Antenna, LHGXA, AS-4429	A1380	$425,000	2	2	2	2	2
Radar Set, Firefinder, 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	$1,521,756	2	2	2	2	2
Radio Set, AN/GRC-171B(V)4	A1818	$55,874	34	34	34	34	48
Radio Terminal Set, AN/MRC-142B	A1954	$289,603	1	1	1	1	1
Radio Terminal Set, AN/MRC-142A	A1955	$218,193	0	0	0	0	61
Radio Set, AN/MRC-145A	A1957	$43,986	246	246	246	246	321
Radio Set, AN/PRC-150	A2042	$19,247	525	525	525	525	525
Radio Set, AN/PRC-148, Urban (V1) & (V2)	A2043	$7,115	739	739	739	739	1,021
Radio Set, Manpack, PRC-148(V)1	A2044	$7,431	342	342	342	342	380
Radio Set, Multiband, FALCON II, AN/PRC-117F	A2068	$27,450	523	523	523	523	523
Radio Set, AN/PRC-119F	A2079	$4,346	672	672	672	672	672

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Radio Set, EPLRS, AN/VSQ-2C	A2152	$41,336	327	327	327	327	624
Radio Terminal Digital, Troposcatter, AN/TRC-	A2179	$1,500,000	18	18	18	18	24
Sector Anti-Air Warfare FAC, AN/TYQ-87	A2390	$427,000	2	2	2	2	3
Tactical Air Ops Module, AN/TYQ-23(V)4	A2525	$8,054,500	6	6	6	6	6
Tactical Data Network, AN/TSQ-222	A2535	$650,000	4	4	4	4	7
Tactical Command System, AN/USC-55A	A2551	$280,000	3	3	3	3	3
Advanced Field Artillery Target Designation System (AFATDS)	A2555	$44,143	135	135	135	135	156
Target Locator, Designator & Hand-off System (TLDHS) (BLKII), AN/PSQ-19A	A2560	$42,000	83	83	83	83	150
Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T), AN/TSC-154	A3232	$825,000	6	6	6	6	6
UAV System, Dragon Eye	A3252	$100,000	0	0	0	0	71
Communications Interface Sys, AN/MRQ-12(V)3	A3270	$1,214,100	12	12	12	12	13
Interrogator Computer, TSEC/KIR-1C	A8018	$1,499	4	4	4	4	4
Transponder Computer, TSEC/Kit-1C	A8019	$1,254	0	0	0	0	22
Electronic Key Generator, TSEC/KG-40A/P	A8038	$13,500	11	11	11	11	14
Remote Rekey Equipment	A8072	$18,860	1	1	1	1	7
Computer Set, Digital (Blue Force Tracker)	A9001	$15,850	0	0	0	0	93
Engineer							
Air Conditioner, 1.5-ton, 60Hz	B0003	$8,541	75	75	75	75	109
Air Conditioner, 1.5-ton, 400Hz	B0004	$5,353	6	6	6	6	6
Air Conditioner, 3-ton, 400Hz	B0006	$8,842	12	12	12	12	30
Air Conditioner, 5-ton, 60K Btu	B0008	$20,251	54	54	54	54	105
Air Conditioner	B0010	$33,021	9	9	9	9	9
Environmental Control Unit (ECU), 18K Btu	B0012	$5,267	66	66	66	66	195
Environmental Control Unit (Air Conditioner)	B0014	$15,092	348	348	348	348	542
Integrated Trailer ECU	B0018	$79,900	38	38	38	38	38
Hydroseeder, Trailer-mounted	B0025	$25,650	5	5	5	5	6
Hydroseeder, Skid-mounted	B0026	$25,650	3	3	3	3	6
MRAP Buffalo, Mine Protected Clearing Vehicle, BUFF701	B0035	$1,100,026	0	0	0	0	3
All Terrain Crane (ATC) MAC-50	B0038	$578,000	9	9	9	9	29
Airfield Damage Repair (ADR) Kit, GBE Runway Repair	B0039	$450,000	3	3	3	3	4
Tractor, Medium	B0060	$325,000	44	44	44	44	58
Tractor, Wheeled, Multipurpose (TRAM) 624K	B0063	$123,508	84	84	84	84	107
Air Conditioner, .75-ton	B0074	$8,476	28	28	28	28	46
Boat, Bridge Erection, USCSBMK3	B0114	$249,187	6	6	6	6	42
Bridge, Medium Girder (MGB), Dry Gap	B0152	$964,515	4	4	4	4	6
Bridge, Floating Ribbon, 70-Ton	B0155	$3,568,000	4	4	4	4	6
Container Handler, Rough Terrain, KALMAR	B0392	$525,000	4	4	4	4	11
Mine Detecting Set, AN/PSS-14	B0476	$19,175	121	121	121	121	132

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Excavator, Armored Combat, M9 ACE	B0589	$1,000,000	4	4	4	4	20
Fuel Dispensing Sys, Tactical, Airfield, M1966	B0675	$331,062	0	0	0	0	3
Fuel System, Amphibious Assault, M69HC	B0685	$1,238,680	0	0	0	0	3
Generator Set, 3kW, 60Hz, MEP-831A	B0730	$9,922	138	138	138	138	339
Generator Set, 10kW, 60Hz, TQG MEP-803A	B0891	$14,345	150	150	150	150	320
Generator Set, 10kW/400Hz, TQG MEP-813	B0921	$15,304	8	8	8	8	8
Generator Set, 60Hz, MMG 25	B0930	$16,380	24	24	24	24	24
Generator Set, 30kW, 60 Hz, MEP-005A/805A/B	B0953	$26,705	98	98	98	98	234
Generator Set, 60kW, 400Hz, TQG MEP-815	B0971	$24,334	4	4	4	4	4
Generator Set, 60Hz, MEP-513A	B0980	$5,262	49	49	49	49	66
Generator Set, 60kW, 400Hz, MEP-816A	B1016	$28,425	16	16	16	16	16
Generator Set, 60 kW, 60Hz, MEP-006A/806B	B1021	$25,073	81	81	81	81	155
Generator Set, 100kW, 60Hz, TQG MEP-807A	B1045	$67,000	43	43	43	43	49
Grader, Road, Motorized-130G	B1082	$67,724	13	13	13	13	18
Refueling System, Expedient	B1135	$101,863	3	3	3	3	3
Fuel Pump Module (SIXCON)	B1580	$23,350	55	55	55	55	114
Roller, Compactor, Vibratory, SP, CS563D	B1785	$63,000	5	5	5	5	10
Storage, Tank, Module, Fuel (SIXCON)	B2085	$6,948	142	142	142	142	303
Storage, Tank, Module, Water (SIXCON)	B2086	$5,524	67	67	67	67	279
Sweeper, Rotary, Vehicle-mounted	B2127	$215,781	6	6	6	6	6
Loader, Backhoe (BHL)	B2483	$122,622	18	18	18	18	18
Forklift, Extended Boom	B2561	$98,442	53	53	53	53	75
Rough Terrain Forklift, Light Capacity	B2566	$33,000	64	64	64	64	87
Tactical Water Purification System (TWPS)	B2605	$350,000	15	15	15	15	33
General Supply							
Oxygen Mask	C2278	$2,400	112	112	112	112	156
Oxygen System, Portable	C2286	$2,495	156	156	156	156	156
Re-breather Unit, Oxygen, PHAOS, OXCON	C2288	$15,400	27	27	27	27	66
Breathing Apparatus, Underwater, MK25 Mod2	C4185	$4,827	100	100	100	100	120
Device Propulsion, Diver	C4549	$77,270	16	16	16	16	16
Parachute, Personnel, Maneuverable (MMPS)	C5649	$16,000	266	266	266	266	266
Raiding Craft, Cmbt, Rubber, Inflatable, F470	C5901	$15,720	44	44	44	44	60
Motor Transport							
Truck, Cargo, MTVR 7-ton Armored, AMK23	D0003	$294,176	16	16	16	16	312
Truck, Cargo, MTVR 7-ton Armored, AMK25	D0004	$3,152	8	8	8	8	78
Truck, Cargo, MTVR 7-ton Armored, AMK27	D0005	$181,000	0	0	0	0	61
Truck, Cargo, MTVR 7-ton Armored, AMK28	D0006	$375,500	0	0	0	0	11
Truck, Dump, MTVR 7-ton Armored, AMK29	D0007	$173,900	0	0	0	0	32
Truck, Dump, MTVR 7-ton Armored, AMK30	D0008	$190,000	0	0	0	0	7
Tractor, MTVR 7-ton Armored, AMK31	D0013	$220,000	10	10	10	10	63
Truck, Wrecker, MTVR 7-ton Armored, AMK36	D0015	$565,883	0	0	0	0	47
HMMWV, ECV, Enhanced, M1152 (2-Door)	D0022	$62,665	18	18	18	18	37

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
MRAP JERRV, 4X4	D0025	$705,421	0	0	0	0	9
MRAP JERRV, 6X6	D0027	$680,000	0	0	0	0	7
HMMWV, ECV, Armament Carrier, M1151	D0030	$119,000	143	143	143	143	429
HMMWV, ECV, TOW Carrier, Armored,	D0032	$200,000	0	0	0	0	98
HMMWV, ECV, Armored, M1152	D0033	$177,000	256	256	256	256	315
HMMWV, ECV, C2/General Purpose, M1165	D0034	$179,800	133	133	133	133	1,518
Trailer, General Purpose, 4-ton, MK18A1	D0081	$25,000	0	0	0	0	380
Truck, Cargo, MTVR 7-ton, MK23/MK25	D0198	$141,022	543	543	543	543	547
Front Power Unit, Logistics Vehicle System, MK48 Mod 0	D0209	$189,000	111	111	111	111	160
Semitrailer, Refueler, 5000 gal., MK970A	D0215	$214,064	21	21	21	21	63
Semitrailer, 40-ton Low-bed, M870	D0235	$61,710	37	37	37	37	65
Trailer, Cargo, Resupply for HIMARS, MK38	D0861	$56,156	34	34	34	34	36
Trailer, Powered, Container Hauler, MK14	D0876	$65,000	65	65	65	65	213
Trailer, Powered, Wrecker/Recovery, MK15A1	D0877	$192,000	15	15	15	15	16
Trailer, Powered, 5th Wheel, MK16 Mod 0	D0878	$81,000	39	39	39	39	39
Trailer, Water Tank, 400 gal., M149A2	D0880	$12,955	226	226	226	226	268
Trailer, Ribbon Bridge, MK18A1	D0881	$75,000	36	36	36	36	36
Truck Cargo 22.5-ton, 10X10, LVSR	D0886	$319,529	125	125	125	125	189
HMMWV, Ambulance, 4 Litter, Armored, M997	D1001	$113,998	87	87	87	87	91
HMMWV, Ambulance, 2 Litter, Soft Top, M1035	D1002	$68,212	43	43	43	43	50
Truck, Cargo, MTVR 7-ton XLWB, MK27/MK28	D1062	$250,424	40	40	40	40	40
Truck, Cargo, MTVR 7-ton, MK37	D1063	$404,398	35	35	35	35	36
Truck, Aircraft Crash/Structure Firefighting, A/S32P-19A	D1064	$162,562	10	10	10	10	24
Truck, Dump, RTAA, 7-ton	D1073	$174,699	50	50	50	50	52
Interim Fast Attack Vehicle (IFAV), 04751E	D1160	$65,162	8	8	8	8	18
Ordnance & Weapons							
Illuminator, Infrared (IZLID 1000P)	E0006	$7,501	92	92	92	92	128
Night Sight, Scout Sniper Medium Range	E0020	$8,795	508	508	508	508	508
Range Finder, Laser	E0042	$79,400	36	36	36	36	53
Launcher, Tubular F/GM(TOW), M41A1 SABER	E0055	$1,010,000	53	53	53	53	124
Mk 1 Mod 0 MTRS EOD Packbot	E0064	$129,000	3	3	3	3	3
Mk 2 Mod 0 MTRS EOD Talon	E0066	$134,000	3	3	3	3	3
Bridge, Scissor for AVLB	E0149	$304,952	2	2	2	2	4
Launcher, Bridge, Armored Vehicle, M60A1	E0150	$527,126	2	2	2	2	4
Aiming Circle	E0180	$3,725	92	92	92	92	100
Command Launch Unit, Javelin M98A1	E0207	$133,063	46	46	46	46	72
M39 Enhanced Marksman Rifle (EMR)	E0311	$4,025	30	30	30	30	30
Sight, Thermal, AN/UAS-12C Hybrid	E0330	$116,014	118	118	118	118	126
Howitzer, 155mm, Towed, Lightweight, M777	E0671	$2,000,000	48	48	48	48	48
Assault Amphibious Vehicle (AAV), Command/Communications, AAVC7A1	E0796	$2,000,000	5	5	5	5	5

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
AAV, Personnel, AAVP7A1	E0846	$2,000,000	42	42	42	42	42
AAV, Recovery, AAVR7A1	E0856	$2,000,000	6	6	6	6	6
Launcher, Assault Rocket, 83mm, MK153 Mod 0	E0915	$15,000	219	219	219	219	270
Launcher, Tubular F/GM (TOW), M220E4	E0935	$75,742	50	50	50	50	122
Light Armored Vehicle, Anti-Tank, LAV-AT	E0942	$840,637	10	10	10	10	24
Light Armored Vehicle, Cmnd/Control, LAV-C2	E0946	$592,911	10	10	10	10	10
Light Armored Vehicle, 25mm, LAV-25	E0947	$543,918	83	83	83	83	88
Light Armored Vehicle, Logistics, LAV-L	E0948	$386,380	7	7	7	7	22
Light Armored Vehicle, Mortar, LAV-M	E0949	$435,797	9	9	9	9	12
Light Armored Vehicle, Maint/Recovery, LAV-R	E0950	$431,368	3	3	3	3	8
Machine Gun, .50 cal., Browning, M2	E0980	$8,118	507	507	507	507	585
Machine Gun, .50 cal., M48	E0984	$13,648	47	47	47	47	84
Machine Gun, Medium, 7.62mm, M240B	E0989	$6,000	1,082	1,082	1,082	1,082	1,349
Machine Gun, 40mm, MK-19 Mod3	E0994	$15,320	434	434	434	434	549
GLTD II Target Designator	E1030	$120,000	65	65	65	65	67
Vector 21	E1048	$26,236	452	452	452	452	480
Mortar, 60mm, M224	E1065	$55,879	80	80	80	80	81
Mortar, 81mm, M252	E1095	$121,855	84	84	84	84	84
Velocity System, Muzzle (MVS)	E1145	$25,000	17	17	17	17	18
Recovery Vehicle, Heavy, Full-Tracked, M88A2	E1378	$2,748,846	6	6	6	6	6
Rifle, Sniper, 7.62mm, M40A5	E1460	$6,034	118	118	118	118	149
Rifle, Scoped, Special App (SASR), .50 cal.	E1475	$7,500	73	73	73	73	82
High Mobility Artillery Rocket System (HIMARS)	E1500	$2,500,000	18	18	18	18	18
Tank, Combat, Full-tracked, 120mm Gun, M1A1	E1888	$2,393,439	48	48	48	48	48
Direct Spt Electrical Sys Test Set (DSETS), AN/USM-615	E1906	$561,312	2	2	2	2	3
Sight, Weapon, Thermal, Medium (MTWS)	E1975	$11,300	1,243	1,243	1,243	1,243	1,349
Sight, Weapon, Thermal, Heavy (HTWS)	E1976	$11,999	259	259	259	259	1,134

Note: The above table reflects estimated on-hand quantities against the full wartime requirement. USMC equipping strategy is that the RC maintains on-hand a Training Allowance only. The Training Allowance is the portion of the wartime requirement necessary to conduct home station training. USMC operating concepts rely on global sourcing and pre-positioned assets for combat. When activated, the USMC plans on RC units falling in on either prepositioned equipment or assets already in theater from previous rotations. The monetary value of the delta between the End FY 2014 O/H and the End FY 2014 Req (wartime requirement) is $820,867,147. The monetary value of the delta between the End FY 2014 O/H and the USMCR Training Allowance is $345,495,471. (See page 3-3; para. I.B.-I.C for more information)

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 2011.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Helicopter, Attack, AH-1W	AH-1W	15	
Helicopter, Utility, UH-1N	UH-1N	27	
Helicopter, Cargo, CH-46E	CH-46E	41	
Helicopter, Cargo, CH-53E	CH-53E	13	
Aircraft, Refueling/Cargo, KC-130T	KC-130T	19	
Aircraft, Fighter/Attack, F/A-18A	F/A-18A	25	
Aircraft, Fighter/Attack, F/A-18A++	F/A-18A++	24	
Aircraft, Fighter, F-5F	F-5F	32	
Aircraft, Fighter, F-5N	F-5N	31	
Aircraft, Utility/Cargo, UC-12B	UC-12B	28	
Aircraft, Utility/Cargo, UC-35C	UC-35C	11	
Aircraft, Utility/Cargo, UC-35D	UC-35D	8	
Communications/Electronics			
Tactical Exploitation Remote Workstation	A0138	4	Workstations currently exceeding standard refresh cycle. Warranties are beginning to expire. Refresh efforts are in process.
Radio Terminal Set, AN/TRC-170	A2179	16	Fielded in mid 1990s.
Motor Transport			
HMMWV, Expanded Capacity Vehicle (ECV), M1152 (2-Door) Base	D0022	6	No longer being procured. Does not meet Marine Corps Armoring Strategy.
HMMWV, ECV, Armament Carrier, M1151A1B1FK5	D0030	6	HMMWV-ECV no longer being procured.
HMMWV, ECV, C2/General Purpose, M1165-Base	D0031	6	HMMWV-ECV no longer being procured.
HMMWV, ECV, M1152A1-Integrated Armor Protection (IAP)	D0033	6	HMMWV-ECV no longer being procured. There are two versions of the M1152 (IAP and Fully Armored.)
HMMWV, ECV, M1152A1B2FK5	D0033	6	
HMMWV, ECV, Command & Control Group, M1165A1-IAP	D0034	5	HMMWV-ECV no longer being procured. There are two versions of the M1165A1 (IAP and Fully Armored.)
HMMWV, ECV, Command & Control Group, M1165A1B3FK5	D0034	5	
Front Power Unit, Logistics Vehicle System (LVS), MK48	D0209	25	Majority of MK48s LVSs (1,682) were procured in 1984. There was a rebuy of limited quantities which took place in 1995 of 84 vehicles. There is no open production line for MK48s.
Semitrailer, 40-ton Low-bed, M870	D0235	7	
Truck, Aircraft Crash/Structure Firefighting, A/S32P-19A	D1064	25	There is no open production line for P-19s. No additional P-19s can be provided.

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
HMMWV, Ambulance, 4 Litter, Armored, M997A2	D1001	15	No programed replacement until fielding of the Joint Light Tactical Vehicle (JLTV) Ambulance.
HMMWV, Ambulance, 2 Litter, Soft Top, M1035A2	D1002	15	No programed replacement until fielding of the JLTV Ambulance.
HMMWV, TOW Carrier, M1045A2	D1125	15	
HMMWV, Cargo/Troop Carrier, M1123	D1158	15	
HMMWV, Armament Carrier, W/SA, M1043A2	D1159	15	
Front Power Unit, Logistics Vehicle System, MK48	D0209	26	Majority of MK48s LVS (1,682) were procured in 1984. There was a rebuy of limited quantities which took place in 1995 of 84 vehicles. There is no open production line for MK48s.
Semitrailer, 40-ton Low-bed, M870	D0235	8	PM MT has FY 2010 supplemental funding to procure 15 trailers for the Reserves, which would complete the AAO.
Truck, Aircraft Crash/Structure Firefighting, A/S32P-19A	D1064	26	There is no open production line for P-19s. No additional P-19s can be provided.
Weapons			
Howitzer, 155mm, Towed, Medium, M198	E0665	24	Being replaced by M777 Lightweight Howitzer.
Assault Amphibious Vehicle (AAV), Personnel, AAVP7A1	E0846	39	
Light Armored Vehicle (LAV), 25mm (LAV-25)	E0947	16	Average age of USMCR E0947s was reduced from 23 to 16 yrs as a result of the delivery of 30 vehicles produced during 2008-2009. Current average age of the entire Marine Corps fleet of E0947 is 22 yrs as a result of the new buys.
Tank, Combat, 120mm Gun, M1A1	E1888	14	

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

Table 3

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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.			
Nomenclature	**FY 2012**	**FY 2013**	**FY 2014**
P-1R data from FY 2012 President's Budget Submission was not available in time for publication in the NGRER.			
The FY 2012 P-1R will be available on the Office of the Under Secretary of Defense (Comptroller) public web site (http://comptroller.defense.gov/index.html) upon release of the FY 2012 President's Budget Submission.			

USMCR-3-1

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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
FY 2009 Title III NGREA Equipment			
Light Armored Vehicle 25 A2 Variant (LAV-25A2)	$16,463,000		
BRITE STAR Forward-looking Infrared (FLIR)	7,200,000		
Tactical Remote Sensor Suite (TRSS)	5,764,000		
Tactical Laptop Computer Package	4,713,000		
Supporting Arms Upgrade to Digital Training Environment	2,882,000		
Embarkation Materials	200,000		
Alternative/Renewable Energy Production Equipment	200,000		
FY 2009 Title IX NGREA Equipment			
Logistical Vehicle Replacement System-Cargo	17,467,718		
UC-35D Aircraft Survivability Upgrades	3,000,000		
Tactical Remote Sensor System Upgrades	2,723,400		
Commercial Satellite Communication Set	514,500		
Data Processing Module	328,000		
Digital Terrain Analysis Mapping System - Lite	315,000		
Marine Corps Tactical Welding Shop	210,000		
Advanced Imagery Module	137,000		
Tactical Handheld Communication Set	132,000		
Handheld Satellite Communication Set	96,600		
Media Exploitation Set-Lite	75,000		
FY 2010 Title III NGREA Equipment			
Light Armored Vehicle 25mm A2 Variant (LAV-25A2)		$28,572,840	
Light Armored Vehicle Command & Control (C2) A2 Variant (LAV-C2A2)		16,044,800	
Air Traffic Control Simulation Package		308,000	
Total	**$62,421,218**	**$44,925,640**	

1. FY 2011 NGREA data from FY 2011 Defense Appropriations Bill was not available in time for publication in the NGRER. Data for FY 2011 will be provided in next year's NGRER.

Table 5

USMCR
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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks

Service has no planned transfers or withdrawals for the years FY 2012 thru FY 2014.

Table 6

USMCR
FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 Planned Transfers & Withdrawals							
USMCR indicated no planned transfers or withdrawals in the FY 2008 NGRER.							
FY 2008 P-1R Equipment							
155mm Lightweight Towed Howitzer				$93,379,000	0		
LAV PIP				6,132,000	7,700,000		
High Mobility Artillery Rocket System				209,000	209,000		
Field Medical Equipment				159,000	0		
AAV7A1 PIP				21,000	40,000		
Family of Construction Equipment					20,392,000		
Environmental Control Equipment					6,806,000		
Tactical Fuel Systems					5,563,000		
Power Equipment Assorted					4,790,000		
Container Family					3,838,000		
Weapons and Combat Vehicles under $5M					3,800,000		
Amphibious Support Equipment					2,346,000		
Bulk Liquid Equipment					108,000		
FY 2008 NGREA Equipment							
F/A-18+ LITENING II Targeting Pod						$14,700,000	$14,700,000
UC-12 Aircraft						9,100,000	9,100,000
Deployable Virtual Training Environment (DVTE)						4,995,000	4,995,000
Medium Tactical Vehicle Replacement - Operator Driving Simulator (MTVR-ODS)						4,445,000	4,339,500
BRITE STAR Forward Looking Infrared (FLIR)						3,600,000	3,600,000
Tactical Remote Sensor Suite (TRSS)						2,911,000	2,911,000
Virtual Combat Convoy Trainer - Reconfigurable Vehicle Simulator (VCCT-RVS)						2,750,000	2,878,000
KC-130T AN/ARC-210 1556 to 1794 Upgrade						1,437,000	1,437,000
HMMWV Egress Assistance Trainer (HEAT)						500,000	500,000
Multi-band Man Pack (Rover III)						258,000	235,500
TOTAL				**$99,900,000**	**$55,592,000**	**$44,696,000**	**$44,696,000**

Table 7

USMCR
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 2012 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution To Satisfy
Major Item Equipment Requirements

USMCR
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	Light Armored Vehicle (LAV), 25mm (LAV-25A2)	88	5	$3,200,000	$16,000,000	Provides a complete T/E of A2 Upgraded LAVs. LAVs are a critical low density combat capabilty within the Marine Corps. Current operations have resulted in the majority of upgraded LAVs going forward for combat operations. Outfitting the RC with all A2 variants increases AC/RC compatibility and provides an additional LAV Bn as a strategic reserve.
2	LAV, Maint/Recovery (LAV-R)	8	5	$2,200,000	$11,000,000	
3	LAV, Logistics (LAV-L)	22	15	$2,000,000	$30,000,000	
4	LAV, Mortar (LAV-M)	12	3	$2,500,000	$7,500,000	
5	LAV, Anti-tank (LAV-AT)	24	14	$3,200,000	$44,800,000	
6	KC-130J Aircraft	28	19	$73,236,000	$1,391,484,000	Fielding of the KC-130J begins in FY 2014 and continues beyond FY 2020. The extended nature of this fielding timeline results in significant operational and training compatiblity issues as the AC is already fielded the KC-130J. Only 9 aircraft are programmed for the FYDP.
7	KC-130J Simulator	1	1	$25,000,000	$25,000,000	There is no KC-130J WST planned for the RC. Providing a RC WST reduces the need to compete with limited AC WSTs.
8	Logistics Vehicle System Replacement (LVSR), Cargo	130	57	$400,000	$22,800,000	Replaces aging LVS fleet. AC and RC are undergoing fielding of the Cargo variant. Tractor and Wrecker variants are in final acquisition. Necessary to ensure maximum compatibility across the RC.
9	LVSR, Tractor	35	35	$450,000	$15,750,000	
10	LVSR, Wrecker	11	11	$500,000	$5,500,000	

Chapter 4
United States Navy Reserve

I. Navy Overview

A. Navy Planning Guidance

"The U.S. Navy is a globally deployed, persistently forward, and actively engaged force with more than 50,000 Sailors stationed around the world, including 13,000 Sailors on the ground in Central Command. These Sailors are carrying out the Maritime Strategy's six core capabilities of: forward presence, deterrence, sea control, power projection, maritime security, and humanitarian assistance and disaster response. In addition to the core capabilities the CNO will place particular emphasis on five priorities: continue to be the dominant, ready naval force across all maritime missions; build a Navy with appropriate force structure and strategic laydown; achieve decision superiority; align the requirements, resources and acquisition processes; and evolve and establish international relationships. Demand for Navy forces is the highest it has been in recent years, and we are responding to this demand with more agility and flexibility than ever before." (Chief of Naval Operations [CNO] Guidance for 2010, "Executing the Maritime Strategy," dated September 2009)

The CNO's guidance articulates the Navy's core capabilities and priorities for executing the Maritime strategy. Furthermore, the CNO has testified before Congress that, "we are one Navy today with a Navy Reserve whose efforts are clearly aligned with and support the CNO's priorities."

The Chief of Navy Reserve (CNR) Navy Reserve Strategic Plan for 2010, "Ready Now," states that the mission of the Navy Reserve is to provide strategic depth and deliver operational capabilities to our Navy and Marine Corps team, and joint forces, from peace to war. "The vision for the Navy Reserve is to be a provider of choice for essential naval warfighting capabilities and expertise, strategically aligned with mission requirements, and valued for our readiness, innovation, and agility to respond to any situation." The following points provide detail on the character of service in the Navy Reserve as it executes its mission in pursuit of this vision:

- The Reserve Component (RC) will provide the Navy with strategic depth by maintaining unsurpassed individual, command, and force readiness. The RC is ready to surge forward—anytime, anywhere—from peace to war.

- The RC's flexibility, responsiveness, and ability to serve across a wide spectrum of operations clearly enhance the Navy Total Force; act as a true force multiplier; and provide unique skill sets toward fulfilling the Navy's requirements in an increasingly uncertain world.

- The RC will deliver timely, cost-effective operational capabilities, through their people and equipment, which are relevant and valued by the Navy. The RC serves alongside Active Component (AC) Sailors and delivers capabilities that are unmatched for quality.

- As the Navy's standard for on-demand expertise, the RC delivers full-time excellence through part-time and full-time service. RC contributions to national security are enabled

by policies, processes, and administrative systems that are transparent and seamless, making it easy for Sailors and their families to serve.

- The RC is the Force that others want to join and its diversity reflects the face of the nation. The RC gives Sailors options that allow them to achieve a true life/work balance while they "Stay Navy" and continue contributing to our warfighting effectiveness.

RC actions and resources are fully aligned to achieve this vision. The RC is committed to supporting the Fleet and combatant commands, ready and fully integrated.

B. Navy Equipping Policy

The Navy's overarching equipping policy is delineated in the Office of the CNO (OPNAV) Instruction 4423.3 series, titled *Equipping Reserve Forces*. This instruction states that Navy Reserve 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 the distribution of new and combat serviceable equipment, with associated support and test equipment, should be given to units scheduled to be deployed and/or employed first. Equipment priorities for Ready Reserve units will be established using the same methodology as AC units having the same mobilization or deployment requirements.

The Navy has established a seamless and fully integrated Total Force. The RC is a force multiplier to the Total Force that can be used periodically and predictably, providing operational support when and where it is needed at a cost savings to the Navy. Within the Fleet Readiness Enterprise, each Navy Warfare Enterprise (Naval Aviation, Surface Warfare, Undersea, Naval Network Warfare Command, and Naval Expeditionary Combat) identifies RC requirements for new equipment as part of the Navy's resource-allocation process. This equipment is used to generate and sustain Fleet readiness during at-home training and forward-based operations, and is ready to surge forward as combat replacement or capacity in response to a Request for Forces to be sourced by the Navy. Navy Reserve expeditionary forces have been heavily mobilized to the extent that authorized equipment needs modernization and replacement. Similarly, RC aviation squadrons have been utilized at higher than programmed rates due to ongoing overseas contingency operations (OCO), and the accelerated fatigue has created the need to recapitalize, all within a challenging budgetary environment.

The Department of the Navy funds RC equipment through the President's Budget (PRESBUD) request (consisting of the Aircraft Procurement, Navy [APN] and Other Procurement, Navy [OPN] accounts), Congressionally-added funding, and National Guard and Reserve Equipment Appropriation (NGREA) funding. Figure 4-1 provides an overview of funding provided to the Navy RC from all three sources from FY 2005 through FY 2011.
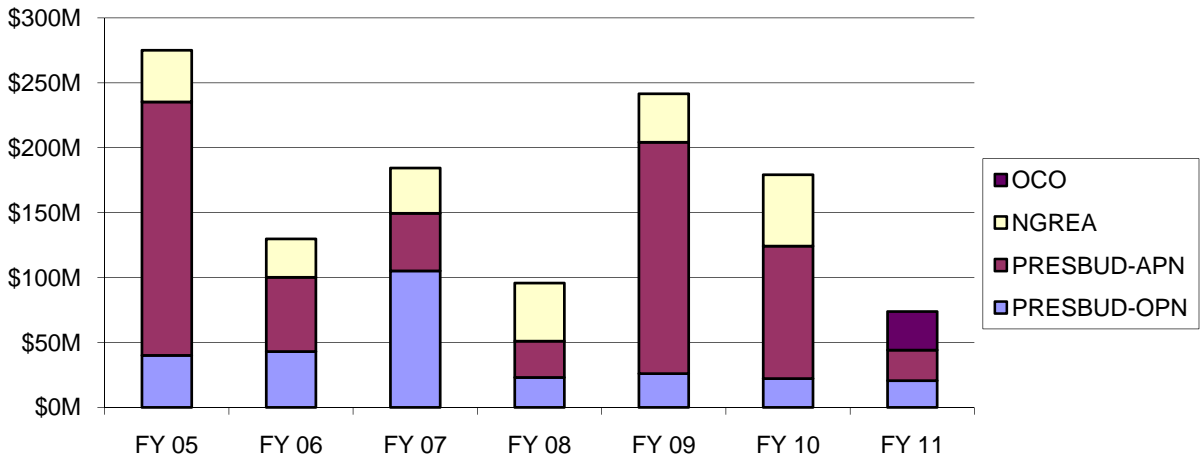
Figure 4-1. Navy RC Procurement Funding Sources ($M)

C. Plan to Fill Mobilization Shortages in the RC

Major operation plans (OPLANs) and contingency plans require RC units to deploy. Navy Expeditionary Combat Command (NECC) had 20 units and 1,859 personnel deployed during July 2010, as integrated parts of the Navy warfighting plan. Naval component commanders identify equipment requirements during the resource-allocation process, which the CNO then prioritizes.

RC activities maintain equipment as either training or mobilization assets. In many instances, the RC will deploy with AC assets. Mobilization assets are stored at major embarkation locations in the United States as war reserve materiel stock (WRMS) or pre-positioned overseas/afloat. WRMS and pre-positioned equipment are distributed to 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:

- Replacement of the aging C-9B aircraft with the C-40A is a critical RC requirement. The goal of the C-9B aircraft replacement program, initiated in 1997, is to replace the original 27 aging DC-9 and C-9B transport aircraft with 17 C-40A aircraft. To date, 12 C-40A aircraft have been procured. A requirement for 5 more has been identified in the *Naval Aviation Plan 2030*. Procurement has been accomplished through a combination of NGREA, Congressional adds, and PRESBUD funding 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
2003	1	CONG ADD
2004	1	PRESBUD
2005	1	PRESBUD
2009	2	PRESBUD
2010	1	PRESBUD

- Our Tactical Support Wing consists of six squadrons, all with aging and under equipped aircraft. These aircraft provide the most advanced adversary program within the Navy and also use veteran combat-skilled aviators to train our replacement aircrews and deploying carrier air wings while maintaining the ability to mobilize. These squadrons need recapitalization with the F/A-18E/F/G, Joint Strike Fighter (JSF), E-2D, and follow-on adversary platforms to sustain world-class adversary presentation and to be able to deploy in a joint environment.

  - Our adversary inventory begins to retire in 2015. Sustainment of the adversary fleet is required to continue the present support to 2025. An investment in equipping the current fleet with low cost threat capabilities will reduce the risk mentioned above. This equipment includes advanced jamming capability, helmet-mounted cueing system, and data link. As we sustain the existing fleet, we must invest in a follow-on platform that will meet the Fleet's capacity and capability requirements.

  - The continuously evolving threat has significantly outpaced our current adversary force's capabilities. Navy and Marine Corps aviators are forced to accept operational risk versus the current and emerging threat due to our lack of dissimilar category four adversary aircraft. RC aircraft comprise 76 percent of the Navy adversary force, a force that is aging, lacks required threat capabilities, and only meets 60 percent of fleet requirements as related to radar-equipped aggressor aircraft.

  - Forty-four F-5 aircraft were purchased from Switzerland during FY 2003–FY 2007 for use by Navy and Marine Corps RC squadrons as adversary aircraft. These aircraft are performing a vital combat-training mission using veteran combat-skilled aviators to train our replacement aircrews and our deploying carrier air wings. Their upkeep and modernization are of critical importance.

- Replacement of the EA-6B Prowler aircraft with the EA-18G Growler is required to continue RC Fleet electronic attack (EA) capability. RC EA-6Bs were previously scheduled to retire by 2012 coincident with expiration of the expeditionary EA requirements; however, recent

direction proposing an extension of the mission past 2014 includes the RC capability. This extension provides increased viability to the Reserve EA-18G recapitalization plan.

- The Maritime Patrol and Reconnaissance P-3C aircraft continue to be impacted by advancing structural fatigue. Despite the transfer of 35 RC P-3C aircraft from disestablished RC squadrons to the AC, there has still been an overall reduction in inventory. This shortage has resulted in increased AC utilization of RC P-3C aircraft; subsequently leading to 4 of the RC's 12 remaining aircraft (33 percent) being removed from service for depot-level sustainment maintenance during FY 2010. Despite Health of Naval Aviation monthly flight hour restrictions, the increased Fatigue Life Expended (FLE) on the RC aircraft inventory has caused concern that the Total Life Index of the RC P-3s may become insufficient for the RC squadrons to bridge the gap to the RC P-8A. Thus, to meet minimum wartime-readiness capability, the RC's two remaining Maritime Patrol and Reconnaissance squadrons must be recapitalized with the P-8A aircraft.

- Procurement of additional C-130 aircraft to meet the *Naval Aviation Plan 2030* requirement and replacement of the aging and maintenance-intensive C-130T aircraft with the KC-130J are critical RC capability enhancements. C-130 aircraft are a critical part of the Navy-unique fleet essential airlift (NUFEA) mission; they serve as a connector between strategic airlift points and the Carrier Onboard Delivery and Vertical Onboard Delivery to the fleet, and specialize in oversized cargo with tanking capability.

- Modernization and recapitalization of Naval Construction Force (NCF), Navy Expeditionary Logistics Support Group (NAVELSG), and Maritime Expeditionary Security Force (MESF) equipment through baseline, OCO, and NGREA funding has filled critical equipment gaps, but $290M of funding is still required for the full modernization of the RC units over the Future Years Defense Program (FYDP).

E. Plan to Achieve Full Compatibility between AC and RC

The Navy is a seamless and fully-integrated Total Force. As such, it plans and programs all equipment inventories to provide the most capable systems to meet mission requirements and minimize the effects of equipment shortfalls and incompatibility throughout the mission spectrum of the Fleet. The Navy must have interoperability between all elements of the Total Force to ensure a war winning team. AC and RC equipment acquisition, upgrade programs, and equipment redistribution from the AC to the RC have virtually eliminated capability and compatibility gaps between RC, AC, and joint forces.

The Navy has leaned RC force structure to the appropriate capability and capacity required to sustain the operational reserve. The value and the return on investment our Sailors and equipment deliver to the Total Force are continually measured. Critical recapitalization is needed now, and budgetary dynamics make the RC reliant on a combination of the Service priority and the direct appropriation for recapitalizing aging and depreciated assets.

II. Navy Reserve Overview

A. Current Status of the Navy Reserve

1. General Overview

In the CNR's statement before the Subcommittee on Personnel, Senate Armed Services Committee, May 12, 2010, the CNR stated "we are fully engaged in the development of Naval Aviation Plan 2030 to ensure that the valued capabilities delivered by the Navy Reserve are properly resourced."

Navy Reserve aviation trains the Fleet, moves the Fleet, and, when needed, surges to the fight. Twenty-eight squadrons and twenty-five

> **Top USNR Equipping Challenges**
>
> - Aircraft procurement (C-40A, E/A-18G, P-8, KC-130J, F/A-18E, and JSF)
>
> - Expeditionary equipment procurement (MESF, EOD, NCF, NAVELSG, MCAST, EXPCOMBATCAM, and NEIC)

Squadron Augment Units, which support AC fleet replacement squadrons and Chief of Naval Air Training Squadrons, provided more than 80,000 flight hours in FY 2010, including 80 percent of the Navy's direct and indirect Fleet operations support. Our four adversary squadrons provided 76 percent of Navy capacity, and the Fleet Logistics Support Wing provided 100 percent of the shore-based NUFEA with an average weekly cost avoidance of $818.5K. These assets provide strategic surge capacity and maintain warfighting readiness at a lower cost, both in terms of payroll and airframe life, than AC squadrons. Navy Reserve's lower FLE has provided Navy inventory managers increased options that have been a valuable part of Naval Aviation's recapitalization plan generally, and of P-3Cs and F/A-18s in particular.

Historically, Reserve aircraft have been procured via a combination of routine procurement, the use of NGREA, Congressional buys, and the transfer of aircraft from the AC to the RC as new production aircraft enter the AC inventory.

Current aviation procurement trends will challenge RC aviation capabilities as the Navy Reserve continues recapitalizing the electronic attack capability that is fully integrated into the Airborne Electronic Attack (AEA) deployment plan and has provided 12 years of combat deployments in support of combatant command (COCOM) requirements. The C-40A provides twice the range, twice the cargo load, and twice the Ready-for-Tasking (RFT) days of the C-9B it replaces. The overall burdened hourly operating cost of the C-9B is $8,147/flight hour versus the C-40A cost of $6,141/flight hour. As a result, a $42M per year cost avoidance will be realized by completing C-40A procurement and retiring the 12 remaining C-9Bs.

NGREA will be utilized, as available, to meet the needs of the Navy. NGREA has been a high-impact capital infusion for the Navy Reserve since its inception in 1981, but has taken on added importance in recent years. While the Navy Reserve's NGREA service allocation has decreased from 11.3 percent in 2004 to 5.8 percent in 2010, the appropriation has been instrumental in resourcing the capability of the NECC and has bolstered the recapitalization of critical RC equipment in both Naval Aviation and the Surface Navy. In FY 2010, the Navy Reserve executed NGREA funding to equip the MESF, Explosive Ordnance Disposal (EOD), NCF, NAVELSG, Naval Aviation, and Surface Warfare units with: tactical and armored vehicles, civil

engineering support equipment, communications equipment, table of allowance (TOA) equipment, aviation modernization upgrades, and rigid hull inflatable boats.

The Navy Reserve consists of operational hardware units providing personnel and equipment, and strategic augmentation units, which provide personnel only. 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 program managers to establish equipment allowances for designated RC hardware units to support operational requirements.

The major Navy Reserve hardware units consist of 12 Mobile Construction Battalions, 10 Cargo Handling Battalions, 2 Maritime Expeditionary Security Groups with 7 Security Squadrons, 2 EOD Operational Support Units (OSUs), 14 EOD platoons, 15 RC Maritime Civil Affairs Teams, 32 Expeditionary Combat Camera operators, 8 RC Intelligence Exploitation Teams, 9 Oliver Hazard Perry class guided-missile frigates (FFGs), and 162 aircraft. All RC ships and NECC RC forces are under the operational control of U.S. Fleet Forces Command 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, 76 percent of the adversary training capability, 20 percent of the maritime patrol squadron capability, 13 percent of the airborne early warning (AEW) capability, 12 percent of the rotary-wing capability, and 9 percent of the carrier air wing capability.

a. Fleet Air Logistics

The RC provides 100 percent of the Navy's organic intra-theater, medium-airlift capability for COCOMs 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 more than 36 years in age and require substantial avionics upgrades and engine replacement to meet globally-mandated noise-abatement and navigation requirements. A 2008 Center for Naval Analysis C-9 study calculated an operational equivalency of 1.8 C-9s to 1.0 C-40A; which equates to nearly twice the lift capacity, range, and RFT rate with a C-40 over a C-9. Significant airlift recapitalization was initiated in FY 1997 when $120M of NGREA funding was provided for the procurement of the first 2 C-40A aircraft to begin the replacement of the aging C-9 fleet. Ten more C-40As were procured between FY 1998 and FY 2010 utilizing funding through NGREA, Congressional Adds, and the President's Budget. To date, 9 C-40As have been accepted and are being operated by VR-59 (Naval Air Station [NAS] Joint Reserve Base, Fort Worth, TX); VR-58 (NAS Jacksonville, FL); and VR-57 (NAS North Island, CA).

The C-130Ts are operating at a 5-plane shortfall per CNO's *Naval Aviation Plan 2030* redline requirement (risk-adjusted minimum acceptable number of aircraft). The current fleet is Communications, Navigation, Surveillance (CNS)/Air Traffic Management (ATM) compliant through FY 2014, although limited due to the lack of a certified GPS system and enhanced altitude reporting capability. The Navy has funded a prioritized list of requirements to upgrade these aircraft for CNS/ATM capability to extend the

C-130T fleet past 2014. Conversely, KC-130Js have twice the RFT days as the C-130Ts and are the best investment option. The C-130 remains one of the most versatile and capable logistics aircraft in the Navy Reserve. Its ability to deliver outsized or special handling cargo to nearly any location worldwide remains a critical capability for combatant commanders.

b. Tactical Aviation

The Tactical Support Wing (TSW) provides a strategic reserve for the Navy's 10 carrier air wings (CVW). Additionally, TSW squadrons provide adversary training, counter-narcotics, and homeland defense (HD) operations. The TSW is comprised of 6 squadrons: 1 E/A-6B, 1 F/A-18A+, 1 F/A-18C, 2 F-5F/N, and 1 E-2C.

The E/A-6B squadron, VAQ-209, completed another 75-day deployment to Bagram, Afghanistan in September 2010, flying more than 750 combat hours in support of NATO's International Security Assistance Force. VAQ-209 is scheduled to fly the E/A-6B until FY 2015. The E/A-6B is currently planned to be removed from the Navy's inventory in FY 2016. The Navy is attempting to recapitalize the RC E/A-6Bs with 5 E/A-18G aircraft in FY 2016. Recapitalization and transition are required to mitigate the DoD wide AEA capacity and capability gap across the FYDP and into the out years. Without the RC E/A-18G transition, the Navy will lose critical operational and strategic reserve AEA capability and capacity. These aircraft will ensure COCOM requirements are supported with the ability to maintain the composition of an air wing with the transformational capability for suppression of enemy air defenses, integrated air/ground attack, and OCO missions.

The Navy is seeking to recapitalize the RC legacy Hornet squadrons with an F/A-18E squadron and a JSF squadron. The F/A-18E and JSF will provide sustainable platforms to meet the Navy's vision of future warfare capabilities as discussed in the *Sea Power 21* guiding principles. These baseline strike fighter squadrons will support SEASTRIKE interoperability, the Navy's power projection pillar of operations discussed in *Sea Power 21*, to achieve the COCOM objective to reduce the overall baseline strike fighter shortfall. As the Navy tactical aircraft fleet shrinks and ages, there is a significant dependence on the remaining RC F/A-18 aircraft, which comprise 24 percent of the Navy's adversary capability and 52 percent of the radar-capable adversary sortie requirement. The F/A-18E and JSF will provide sustainable platforms enabling the full spectrum of capabilities, including adversary, in the near and long term.

The E-2C Hawkeye squadron, VAW-77, completed 4 counter narco-terrorism deployments totaling 180 deployed days within the Southern Command (SOUTHCOM) area of responsibility (AOR) during FY 2010. Serving as the primary counter illicit trafficking command and control asset, the squadron provided more than 1,950 flight hours in support of Joint Interagency Task Force South operations. Proficient E-2C tactical control among 19 foreign governments, 7 federal agencies, and all branches of the U.S. military led to the disruption of over $15B in illegal drugs, capture of 6 narco-terrorists, and rescue of 5 lives during search and rescue operations. FY 2010 also saw VAW-77 provide continued operational

control of unmanned aerial vehicles (UAVs) in support of the COCOM-level standing joint task force. Operating six 18 year-old E-2C aircraft, the RC is pursuing a recapitalization plan to transition the squadron to the E-2D Advanced Hawkeye by 2022. The E-2D brings a unique advanced radar package which is highly suited to the Northern Command missile defense mission and would allow VAW-77 to appropriately surge as an active duty squadron if a carrier strike group mobilization was directed. Finally, the command also retains the capacity to serve as an "on call" National Command Authority AEW platform for homeland security contingency and disaster relief operations.

c. Maritime Patrol and Reconnaissance Aircraft (MPRA)

The RC currently provides 8 percent of the Navy's useable maritime patrol aircraft providing antisubmarine warfare (ASW) surge capacity, counter narcotics operations, humanitarian assistance/disaster relief support, increased HD contingency options, and Fleet and NATO exercise support. Reserve Patrol Squadrons provide a necessary and strategic capability for major combat operations, OCO, HD, humanitarian assistance, disaster relief, and other concurrent contingency operations by maintaining aircrew training requirements for all personnel, continuous combat readiness for 6 combat aircrews, and 12 P-3Cs RFT in support of the CNO Maritime Patrol and Reconnaissance Force surge and fleet operational support requirements.

The RC has two P-3C squadrons, composed of six antisurface warfare improvement program (AIP) and six Block Modification Upgrade (BMUP) aircraft. The AIP variant augments the AC P-3 inventory shortfall capable of intelligence, surveillance, and reconnaissance collection. The BMUP variant augments AC P-3 inventory shortfall capable of ASW. The 2 RC MPRA squadrons report directly to AC Patrol and Reconnaissance Wings under the guidance of Commander, Patrol and Reconnaissance Group. RC squadrons support the CNO's *Fleet Response Plan (FRP)* by continuously providing 6 combat-ready aircrews for worldwide surge. Due to the accelerating fatigue of the P-3C aircraft, 35 RC P-3C aircraft have been transferred to the AC inventory as replacements from RC squadrons disestablished in 2006.

RC assets provide the AC with a robust capacity for surge and deployment operations while maintaining the capability to accomplish current fleet-support and AC Fleet Readiness Training Plan requirements. Due to increased COCOM demand, grounding notifications issued through airframe bulletins and increased readiness requirements, the increased AC utilization of remaining RC P-3Cs will force an aircraft replacement for the two RC P-3C squadrons sooner than previously anticipated. In FY 2010, AC aircrews flew 85 percent of the total hours accumulated on the 12 RC P-3C aircraft. Twelve AC squadrons are programmed to transition to the P-8A aircraft beginning in FY 2012. RC combat aircrews will continue to train and execute front-line missions ensuring the MPRA community's ability to satisfy COCOM requirements while the AC fleet transitions to the P-8A. During the AC fleet transition, the Navy is pursuing a plan to replace the RC legacy P-3Cs with 12 P-8As. The recapitalization of RC legacy P-3C with the P-8A is necessary to provide the required number of aircrews and aircraft to fill the most-stressing combat action requirements.

d. Carrier and Expeditionary Strike Group Rotary Aviation

The RC currently provides 3 helicopter squadrons to the Navy's rotary-wing fleet. All 3 squadrons are fully integrated into AC wings. The RC also provides personnel and equipment (8 MH-53E helicopters) in support of 2 composite AC/RC airborne mine countermeasures (AMCM) squadrons, HM-14 and HM-15. Following the completion of the Base Realignment and Closure (BRAC) move in FY 2010, both squadrons will be collocated in NAS Norfolk, VA. RC rotary-wing assets currently provide the Navy's only dedicated Naval Special Warfare support squadron, 12 percent of the Navy's total helicopter inventory, and 37 percent of its AMCM assets. The squadrons perform a variety of critical missions including search and rescue, logistics support, ASW, AMCM, and counter-narcotics operations.

The RC helicopter inventory consists of the HH-60H, SH-60B, MH-60S, and MH-53E aircraft. The RC helicopter footprint in Iraq has been continuous since 2003. Personnel from HSC-84 (NAS Norfolk, VA) and HSC-85 (NAS North Island, CA) have been partially mobilized and deployed in support of OIF, supporting special operations ground force missions in urban and rural areas, psychological operations, and medical and casualty evacuations. In addition to OIF, HSC-85 provides continuous support to the Southern California Offshore Range and also provides the Navy's only firefighting capability to the California Department of Forestry. HSL-60 (Naval Station Mayport, FL) is tasked with counter-narcotics operations, deploying for six-months per year with joint interagency task force organizations in the SOUTHCOM AOR. In July 2009, the CNO directed that HSC-84 and HSC-85 be expanded to provide full rotary wing support to special operations forces. HSC-85 will transition to the HH-60H, and both squadrons will increase their aircraft inventory to 12 aircraft. Transformation to the new primary mission area is slated to begin in FY 2011.

e. Maritime Expeditionary Security Force (MESF)

The MESF is organized into two Echelon IV group commands (AC commander with RC augmentation), 7 RC Echelon V squadron commands, and subordinate Echelon VI division commands. The division commands are specialized in 1 of 3 functional areas: Boat Divisions specialize in waterborne security of vessels and maritime infrastructure; Security Divisions specialize in ground, perimeter, aircraft, and ship-embarked security; and Command and Control Divisions specialize in the establishment of communications and data networks to exercise real-time command and control of security forces and for the tactical surveillance of the littoral battlespace with radar, visual, electro-optical/infrared, and acoustic/other sensors.

The mission of MESF is to provide highly trained, scalable, and around-the-clock sustainable security teams capable of defending mission critical assets in the littoral and near coast environment. MESF units may provide maritime and inshore surveillance, security/anti-terrorism

force protection, ground/afloat defense, airfield/aircraft security, a wide range of secondary tasks, and are deployable worldwide.

All MESF units require individual combat equipment for assigned personnel and sufficient civil engineer support equipment (CESE) for the overland tactical movement of their assigned TOA equipment and personnel. The RC MESF equipment shortfalls are in the Boat Detachment and Security Division TOAs, which directly support tasked military operations missions including OCO, humanitarian assistance, and disaster relief. These shortfalls consist of the Mobile Ashore Support Terminal II, 6X6 stake trucks, and 25 ft Safeboat/34 ft SeaArk patrol boats that will reach the end of service life and require replacement and modernization over the FYDP. MESF has a projected total shortfall of $119M across the FYDP.

f. Explosive Ordnance Disposal (EOD)

The Navy Reserve EOD Force consists of 2 RC Commands located in the fleet concentration areas of San Diego and Norfolk. Both Commands report operationally and administratively to their respective EOD Group Commanders. The Commands provide direct, periodic, and predicable operational support through the utilization of Reserve EOD officers and technicians, Reserve Navy divers, and a host of critical support ratings. Each RC has a manning structure of approximately 25 Active, Full-time Support, and Reserve officers, and 130 Reserve and Active enlisted billets.

The RC EOD Force has equipment shortfalls in its TOA, including high-mobility multipurpose wheeled vehicles (HMMWVs), 7M boats, mini flyaway dive lockers, CESE, and EOD man-transportable robotics systems. Navy EOD Reserve has a projected total shortfall of $59M across the FYDP.

g. Naval Construction Force (NCF)

The Navy Reserve NCF, consisting of naval construction regiments (NCRs) and Naval mobile construction battalions (NMCBs), continues to provide the Navy with a combat and construction capability in OCO. The NCF supports the unified commands and meets Navy component command (NCC) requirements with the AC and RC components of the NCF combined to provide a fully integrated force, with all units having the same operational chain of command, mission, readiness standards, and equipment.

The AC and RC work together to provide ready equipment sets in theater supporting OPLAN requirements. Under the operational control of First Naval Construction Division (1NCD), the RC NCF consists of 4 NCRs, 12 NMCBs, and augmentation forces. The complete integration of RC and AC within the NCF has improved the balance between early and late deploying units. This balance is also achieved through the use of one P32 Naval Construction Augment TOA, which supports 14 NMCBs, 6 of which are stratified to the RC. In addition, the P47 NCF Training

TOA supports the 4 NCRs and 12 readiness support sites (RSS). The balance allows rapid deployment to support Marine Corps headquarters base camps and Navy expeditionary medical units. Furthermore, it has afforded the NCF greater capability to respond to chemical, biological, nuclear, radiological, and explosive incidents on deployment or within the United States.

The RC NCF has equipment shortfalls in its deployment TOA sets. Shortfalls include NCR, NMCB, Naval Construction Augment, and NCF Training TOAs, P05 Containerization Support, P25 Weapons Optics, and P25 Tactical Data Network upgrades that improve overall flexibility to resource detachments and provide Secret Internet Protocol Router Network (SIPRNET) capability for NMCBs. These investments will enhance the RC NCF's exceptional ability to rapidly mobilize, quickly refresh its military skills during post-mobilization training, and then deploy into a hostile theater at the same readiness levels as its AC counterparts. NCF has a projected total shortfall of $38M across the FYDP.

h. Navy Expeditionary Logistics Support Group (NAVELSG)

NAVELSG is predominantly a Reserve operational force comprised of 94 percent RC personnel representing the Navy's primary expeditionary cargo handling capabilities. NAVELSG is an integrated force of AC and RC Echelon V Navy expeditionary logistics regiments (NELRs) and Echelon VI Navy cargo handling battalions (NCHBs). Each unit is capable of rapid worldwide deployment as mission-tasked detachments or as independent units. There is one AC NELR (1st NELR) and 4 RC NELRs (2nd, 3rd, 4th, and 5th NELR). NAVELSG provides pier and terminal operations, surface and air cargo handling, specialized supply support, and ordnance handling management. These capabilities are critical for sustaining forces in support of major combat operations; foreign humanitarian assistance; civil support; and stability, security, transition, and reconstruction operations.

NAVELSG deploys its NCHB capabilities worldwide to support cargo handling and logistics operations and has been deploying to support OCO since 2003. Due to required equipment shortfalls, NAVELSG's deployed forces utilized equipment assets from deployed Army forces and relied on host nation or contracted equipment in lieu of an organic TOA. Achieving complete TOA levels are critical with uncertainty in wartime host nation support and contract equipment support.

Currently, NAVELSG has on-hand only portions of their approved TOA. NAVELSG, NECC, and Naval Facilities Engineering Logistics Center developed a new consolidated TOA, which updated equipment to current technology and developed specific modular capabilities within the NCHBs. The new TOA ensures NCHBs have the necessary equipment to execute their required operational capabilities.

i. Maritime Civil Affairs and Security Training (MCAST) Command

The MCAST Command with its Maritime Civil Affairs (MCA) and Expeditionary Training Teams assess, plan, and execute civil affairs (CA) operations in the maritime environment (including littorals and rivers). They use an effects-based planning methodology by coordinating military-to-military maritime expeditionary core capability training in the areas of naval construction, maritime civil affairs, maritime expeditionary security, riverine, expeditionary logistics, EOD, mobile diving and salvage, and skill sets external to NECC. These operations support the NCC in engaging the civil and military component to enhance the effectiveness of planned or ongoing operations and assist in integrating the NCC or joint force maritime component command actions into the COCOM's overarching CA and military-to-military training programs.

Current MCAST shortfalls are in MCA Team, MCA Mobile Training Team, and the MCA Operations Planning Staff TOAs. The Reserve force currently does not have equipment, and it relies on AC equipment to train and deploy. MCAST has a projected TOA shortfall of $5M across the FYDP, which includes organizational clothing, infantry gear, containers, medical equipment, computers, communications equipment, and embarkation equipment.

j. Expeditionary Combat Camera Norfolk (EXPCOMBATCAM)

The RC members of the EXPCOMBATCAM organization contribute combat documentation teams and imagery management teams that deploy in support of Navy, joint task force, COCOM, Chairman of the Joint Chiefs of Staff, and OSD objectives with specialized imaging capabilities for the attainment of national objectives. EXPCOMBATCAM forces provide specialized imaging acquisition and transmission capabilities to document force deployments and activities before, during, and after military engagements. They also provide a directed imagery capability in support of operational and planning requirements during wartime operations, worldwide crises, contingencies, and exercises.

The current RC funding shortfall is the EXPCOMBATCAM TOA, which includes videography, communications, night vision, and infantry gear. The RC EXPCOMBATCAM does not have existing equipment and uses AC equipment to train and deploy. EXPCOMBATCAM has a projected TOA shortfall of $2M across the FYDP.

k. Navy Expeditionary Intelligence Command (NEIC)

The NEIC provides expeditionary warfighters with timely, relevant intelligence to deny the enemy sanctuary, freedom of movement, and use of waterborne lines of communication while supported forces find, fix, and destroy the enemy and enemy assets within the operational environment.

NEIC is organized, manned, trained, and equipped to provide tailored all-source intelligence information to commanders, mission planners, and deployed units assigned to meet the threat posed by a potential adversary. NEIC personnel understand the operational requirements and are fully integrated into their assigned operational units.

The NEIC TOA has equipment shortfalls, which includes intelligence gathering equipment, communications, night vision, and personnel gear. The RC NEIC does not have existing equipment and uses AC equipment to train and deploy. NEIC has a projected TOA shortfall of $3M across the FYDP.

l. Surface Warfare

The Surface Warfare Enterprise (SWE) is supported by more than 2,000 Surface Navy reservist billets across 86 RC units and detachments. These SWE RC units support 7 major mission areas within Surface and Amphibious Warfare including: Naval Beach Group, Assault Craft Units, BEACHMASTERs, Amphibious Construction Battalions, Tactical Group/Squadron Amphibious Readiness Group Air Control, and Commander Navy Surface Force Pacific and Atlantic Type Commander Afloat Culture Workshop Detachments. Additionally, RC Surface Sailors provided critical operational support to Surface Navy deployments to Central Command, U.S. African Command, SOUTHCOM, and U.S. 7th Fleet. With the disestablishment of the class squadrons (CLASSRONs), the associated ship support unit structure will be realigned to support the Littoral Combat Ship build plan and be positioned to deliver surge capability and mobilization support.

m. Naval Special Warfare

The naval special warfare (NSW) RC organization was only recently established as an "operationalized" NSW Echelon III command in 2008. The NSW RC is commanded by NSW Group Eleven (NSWG-11). The mission of NSWG-11 is to man, equip, train, sustain, and deploy assigned NSW RC forces to accomplish special operations missions assigned by NSW Command, and to administer and manage NSW RC units.

NSWG-11 is the immediate superior for two AC sea-air-land (SEAL) teams, with 28 RC OSUs and 18 regional NSW detachments, comprising 1,005 AC and RC billets. Currently, 96 percent of SEAL officers and 98 percent of enlisted SEALs have been mobilized in support of OCO and other active duty requirements, and fully 1/3rd of NSW RC personnel are providing operational support seamlessly integrated with the NSW total force. Since NSW RC was operationalized in 2008, its

forces have relied heavily upon NSW's AC equipment inventory to perform Reserve training and deployment missions.

2. Status of Equipment

a. Equipment On-hand

Table 1 provides projected RC major equipment requirements and on-hand inventories 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 (36 years old), P-3Cs (28 years old), and EA-6Bs (24 years old). These aircraft all operate at a significantly higher cost, produce lower RFT rates and provide lesser capability than their projected replacement platforms. Additionally, significant amounts of the MESF, NCF, NAVELSG, EOD TOA equipment, CESE, and materials handling equipment are at the end of service life and fully depreciated, which will require a significant capital investment to increase material and operational readiness for the expeditionary forces.

c. Compatibility of Current Equipment with the AC

Achieving equipment compatibility with the AC is one of the Navy's priorities. Procurement and upgrade programs, as well as Congressional funding additions, 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, significant funding increases from Congressional adds and NGREA have aided these units in reducing these shortfalls. The new MCAST Command 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. The RC currently does not have any of the allowed TOA and relies on AC equipment to train and deploy. MCAST has a projected TOA shortfall of $5M across the FYDP.

d. Maintenance Issues

RC equipment maintenance is a top priority. Without properly maintained equipment, RC hardware units are unable to train and deploy mission-ready reservists in support of the Navy's Total Force. Accordingly, sufficient funds are programmed to sustain the material readiness and capability of RC unit equipment. As a result of this emphasis on ready assets, RC equipment readiness remains above minimum CNO-directed levels. This level of readiness has proven to be acceptable as the Navy Reserve has been ready and fully integrated into the Navy's worldwide missions; however, the accelerated service-life expenditure of these assets from OCO require increasing amounts of operation and maintenance accounts. Substantial cost avoidance in these accounts is available through modernized replacement assets.

e. Modernization Programs and Shortfalls

The Navy has a list of unfunded equipment replacement and modernization requirements. Each year, the CNO develops an Unfunded Programs List and forwards it to Congress 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 2012–FY 2014)

1. FY 2014 Equipment Requirements

Table 1 provides projected FY 2012–FY 2014 major equipment inventories and requirements.

2. Anticipated New Equipment Procurements

Significant funding is being provided to MESF, NCF, and NAVELSG to procure ground equipment. This funding has reduced the RC TOA shortfalls for these units and has increased material and operational readiness. *Tables 3* and *4* reflect these anticipated new equipment procurements.

3. Anticipated Transfers from AC to RC

Table 5 provides anticipated major equipment transfers between the AC and 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 2014

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

D. Summary

In summary, the Navy is seamlessly integrating the RC and AC into a cohesive Total Force capable of meeting all operational requirements. The Navy Reserve's top equipment priorities continue to be aircraft procurement, including completing the C-40A (airlift) procurement, and recapitalizing the electronic attack capability that is fully integrated into the AEA deployment plan that has provided 12 years of combat deployments in support of COCOM requirements.

Additionally, the Navy Reserve places great importance on the proper equipping of the expeditionary forces, including MESF, EOD, NCF, NAVELSG, MCAST, EXPCOMBATCAM, and NEIC. Available funds will be used for the recapitalization of critical RC equipment and TOA shortfalls.

The United States Navy is the finest in the world and our Sailors are making a difference every day. The Navy must remain flexible, engaged, and ready to deploy as a Total Force to ensure dominance of our Navy tomorrow, the readiness of our Fleet today and the well being of our people always. The Navy Reserve must provide the Navy with strategic depth by maintaining unsurpassed individual, unit, and force readiness to surge forward at a moment's notice. The Navy Reserve is a force multiplier offering flexibility, responsiveness, and the ability to serve across a

wide spectrum of operations clearly enhancing Navy's Total Force. We must deliver timely, cost effective operational support through our people and equipment while providing on-demand expertise to national security. The Navy Reserve can answer the periodic and predictable call to provide operational support to the Fleet and combatant commanders in support of our global maritime mission. "Ready Now. Anytime, Anywhere."

Table 1

USNR
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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Aircraft							
Aircraft, Transport, C-9B (Skytrain)	C-9B	$10,924,425	12	12	11	11	11
Aircraft, Transport, C-40A (Boeing 737-700)	C-40A	$81,700,000	11	12	12	12	17
Aircraft, Transport, C-130T (Hercules)	C-130T	$28,343,475	19	19	19	19	19
Aircraft, Transport, KC-130J (Hercules)	KC-130J	$84,000,000	0	0	0	0	5
Aircraft, Transport, C-20A (Gulfstream)	C-20A	$18,630,000	1	1	1	1	1
Aircraft, Transport, C-20D (Gulfstream)	C-20D	$21,874,725	2	2	2	2	2
Aircraft, Transport, C-20G (Gulfstream)	C-20G	$32,446,215	4	3	3	3	3
Aircraft, Transport, C-37A (Gulfstream)	C-37A	$48,317,940	1	1	1	1	1
Aircraft, Transport, C-37B (Gulfstream)	C-37B	$64,000,000	3	3	3	3	4
Aircraft, Transport, UC-12B (King Air)	UC-12B	$2,530,575	5	5	5	5	5
Aircraft, Patrol, P-3C (Orion)	P-3C	$74,471,355	12	12	12	12	12
Aircraft, Early Warning, E-2C (Hawkeye)	E-2C	$96,509,610	6	6	6	6	6
Aircraft, Electronic Attack, EA-6B (Prowler)	EA-6B	$87,419,205	4	4	4	4	4
Aircraft, Fighter/Attack, F/A-18A+ (Hornet)	F/A-18A+	$54,074,610	12	12	12	12	12
Aircraft, Fighter/Attack, F/A-18C (Hornet)	F/A-18C	$55,212,075	12	12	12	12	12
Aircraft, Fighter, F-5F (Freedom Fighter)	F-5F	$15,231,060	2	2	2	2	2
Aircraft, Fighter, F-5N (Freedom Fighter)	F-5N	$740,025	30	30	30	30	30
Helicopter, Combat, MH-60S (Seahawk)	MH-60S	$20,621,340	5	0	0	0	0
Helicopter, Combat SAR, HH-60H (Seahawk)	HH-60H	$15,564,330	17	18	24	24	24
Helicopter, Minewar, MH-53E (Sea Dragon)	MH-53E	$22,518,495	8	8	8	8	8
Helicopter, ASW, Frigate, SH-60B (Seahawk)	SH-60B	$19,190,970	6	6	6	6	6
Ships							
Frigate, Guided Missile (Perry Class) Flight III	FFG	$353,149,245	9	8	6	3	3
Naval Beach Group							
Maritime Prepositioning Force Utility Boat	MPF-UB	$1,000,000	7	10	10	10	10
Landing Craft, Mechanized, Mark 8	LCM-8	$1,100,000	4	0	0	0	0
Naval BeachGroup TOA	NBG	$26,705,722	1	1	1	1	1
Maritime Expeditionary Security Force (MESF)							
MESF C2 Division TOA Equipment	G01C2DIV	$20,039,695	6	6	6	6	6
Boat Division TOA Equipment	G01BTDV	$64,261	6	5	5	5	5
Boat Detachment TOA Equipment	G01BTDET	$6,663,486	20	21	21	21	21
Security Division TOA Equipment	G01SCDIV	$6,523,405	10	10	10	10	10

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Reserve Naval Construction Forces (NCF)							
Construction Battalion Maintenance Unit TOA	P05	$13,507,254	2	2	2	2	2
Naval Mobile Construction Battalion TOA	P25	$65,241,995	6	6	6	6	6
Naval Construction Regiment TOA	P29	$11,343,910	4	4	4	4	4
Naval Construction Division TOA	P30	$4,537,564	0	1	1	1	1
Construction Capability Augment TOA	P32	$165,237,772	1	1	1	1	1
NCF Training Allowance TOA	P47	$43,616,211	1	1	1	1	1
Naval Explosive Ordnance Disposal (EOD) Forces							
Naval EOD Operational Support Unit TOA	J04EODSU	$55,761,143	2	2	2	2	2
Navy Expeditionary Logistics Support Group							
Navy Expeditionary Logistics Regiment Staff TOA	F01NLRSTF	$1,272,108	2	2	2	2	3
Expeditionary Communications Detachment TOA	F01ECD	$1,119,862	2	2	2	2	3
Navy Cargo Handling Battalion TOA	F01NCHB	$33,003,330	3	3	3	3	6
Maritime Civil Affairs & Security Training							
Maritime Civil Affairs Team TOA	EO1MCATR	$251,121	15	15	15	15	15
Maritime Civil Affairs Mobile Training Team TOA	EO1MTTR	$1,058,275	1	1	1	1	1
Maritime Civil Affairs OPS Planning Staff TOA	EO1MCATR	$58,663	1	1	1	1	1
Expeditionary Combat Camera (EXPCOMBATCAM)							
EXPCOMBATCAM TOA Equipment	COCAM	$2,800,000	1	1	1	1	1
Navy Expeditionary Intelligence Command (NEIC)							
NEIC TOA Equipment	G11 TOA	$2,788,125	1	1	1	1	1

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 2011.*

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aircraft, Transport, C-9B (Skytrain)	C-9B	36	As C-40s are procurred, increasingly maintenance intensive C-9s are retired.
Aircraft, Transport, C-40A (Boeing 737-700)	C-40A	9	
Aircraft, Transport, C-130T (Hercules)	C-130T	18	
Aircraft, Transport, C-20A (Gulfstream)	C-20A	30	At current usage rate aircraft may expire in 2012.
Aircraft, Transport, C-20D (Gulfstream)	C-20D	26	No impact to mission or performance due to age.
Aircraft, Transport, C-20G (Gulfstream)	C-20G	18	
Aircraft, Transport, C-37A (Gulfstream)	C-37A	11	
Aircraft, Transport, C-37B (Gulfstream)	C-37B	7	
Aircraft, Transport, UC-12B (King Air)	UC-12B	32	No impact to mission or performance due to age.
Aircraft, Patrol, P-3C (Orion)	P-3C	27	Average age of 12 remaining aircraft. 35 aircraft have transferred to AC inventory as a result of RC squadron disestablishment and to provide fatigue life mitigation.
Aircraft, Early Warning, E-2C (Hawkeye)	E-2C	19	
Aircraft, Electronic Attack, EA-6B (Prowler)	EA-6B	24	Aircraft will be phased out of CNAFR inventory in FY 2012.
Aircraft, Fighter/Attack, F/A-18A+ (Hornet)	F/A-18A+	24	28 aircraft have transferred to AC inventory as a result of RC squadron disestablishment and as mitigation to AC fatigue life inventory shortfall.
Aircraft, Fighter/Attack, F/A-18C (Hornet)	F/A-18C	18	
Aircraft, Fighter, F-5 (Freedom Fighter)	F-5E/F/N	33	Current sustainment plan projects aircraft usefull service life to 2025.
Helicopter, Combat, MH-60S (Seahawk)	MH-60S	8	
Helicopter, Combat SAR, HH-60H (Seahawk)	HH-60H	18	
Helicopter, Minewar, MH-53E (Sea Dragon)	MH-53E	20	
Helicopter, ASW, Frigate, SH-60B (Seahawk)	SH-60B	25	
Ships			
Frigate, Guided Missile (Perry Class) Flight III	FFG	28	
Maritime Prepositioning Force Utility Boat	MPF-UB	2	
Landing Craft, Mechanized, Mark 8	LCM-8	23	
Maritime Expeditionary Security Force (MESF)			
MESF C2 Division TOA	G01C2DIV	5	Average age of major equipment in TOA.
Boat Division TOA	G01BTDV	9	Average age of major equipment in TOA.
Boat Detachment TOA	G01BTDET	4	Average age of major equipment in TOA.
Security Division TOA	G01SCDIV	4	Average age of major equipment in TOA.
Navy Expeditionary Logistics Support Group			
Navy Expeditionary Logistics Regiment Staff TOA	F01NLRSTF	6	Average age of major equipment in TOA.
Expeditionary Communications Detachment TOA	F01ECD	3	Average age of major equipment in TOA.

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USNR   Table 2
Average Age of Equipment

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Nomenclature	Equip No.	Average Age	Remarks
Navy Cargo Handling Battalion TOA	F01NCHB	6	Average age of major equipment in TOA.
Naval Explosive Ordance Disposal (EOD) Forces			
Naval EOD Operational Support Unit TOA	J04EODSU	4	Average age of major equipment in TOA.
Naval Construction Force (NCF)			
Construction Battalion Maintenance Unit TOA	P05	12	Average age of major equipment in TOA.
Naval Mobile Construction Battalion TOA	P25	6	Average age of major equipment in TOA.
Naval Construction Regiment TOA	P29	4	Average age of major equipment in TOA.
Construction Capability Augment TOA	P32	10	Average age of major equipment in TOA.
NCF Training of Allowance TOA	P47	4	Average age of major equipment in TOA.

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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.

Nomenclature	FY 2012	FY 2013	FY 2014
P-1R data from FY 2012 President's Budget Submission was not available in time for publication in the NGRER.			
The FY 2012 P-1R will be available on the Office of the Under Secretary of Defense (Comptroller) public web site (http://comptroller.defense.gov/index.html) upon release of the FY 2012 President's Budget Submission.			

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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
FY 2009 Title III NGREA Equipment			
Maritime Expeditionary Security Force (MESF) Equipment			
MESF Personnel Gear Issue	$4,613,000		
MESF C4I Gear	2,551,000		
MESF Non-lethal Weapons	502,000		
Explosive Ordnance Disposal (EOD) Equipment			
EOD Items Under $5M - Kits	6,609,000		
Naval Construction Force (NCF) Equipment			
Civil Engineering Support Equipment (CESE) Construction Equip	3,055,000		
Tactical Vehicles	1,403,000		
Material Handling Equipment	878,000		
Items Under $5M - NCW Equipment	321,000		
Navy Expeditionary Logistics Support Group (NAVELSG) Equipment			
Items Under $5M - NAVELSG Equipment	1,821,000		
120K Fuel System Supply Point	1,634,000		
NAVELSG C4I (Kit)	1,446,000		
Material Handling Equipment	1,026,000		
Tactical Vehicles	340,000		
CESE Construction Equipment	215,000		
Other Equipment			
F-5 Operational Flight Trainer (OFT)	6,000,000		
MPF Utility Boats	3,000,000		
Rigid Hull Inflatable Boat (RHIB)	1,500,000		
FFG Shaft Spares	300,000		
Fall Safe Hangar Fall Restraint System	175,000		
FY 2009 Title IX NGREA Equipment			
NCF TOA Equipment	8,127,000		
C-130T Electronic Propeller Control System (EPCS)	7,560,000		
NCF Tactical Vehicles and Support Equipment	3,485,000		
F5 Wing and F5 Component Upgrade	2,500,000		
NCF Collateral for Facilities	1,640,000		

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
NAVELSG TOA Equipment	978,000		
RHIB for EOD Unit	440,000		
C-9B Full Face Oxygen Masks	270,000		
FY 2010 Title III NGREA Equipment			
NCF CESE (Tactical Equipment, Loader, Concrete Mixer)		$14,900,000	
F-5 Structural Sustainment		11,792,000	
EOD CESE (Cargo Truck, Forklifts, HMMWVs)		11,146,000	
C-130T Simulator Repair and Upgrades		8,400,000	
SH-60B Forward Looking Infrared (FLIR) Turret and Electronic Unit		3,265,000	
Maritime Prepositioning Force Utility Boats (MPFUB)		3,000,000	
SH-60B Night Vision Goggle Head's Up Display Modification		1,242,000	
Remote Access Devices		1,000,000	
C-9B Enhanced Ground Proximity Warning System (EGWPS)		255,000	
Total	**$62,389,000**	**$55,000,000**	

1. FY 2011 NGREA data from FY 2011 Defense Appropriations Bill was not available in time for publication in the NGRER. Data for FY 2011 will be provided in next year's NGRER.

Table 5

USNR
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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Aircraft, Transport, C-9B	C-9B		-1		C-9s retired as C-40s are delivered.
Aircraft, Transport, C-20G	C-20G	-1			Due to planned squadron disestablishment in FY 2013.
Helicopter, Combat SAR, HH-60H	HH-60H	+1	+6		HH-60H cascading to RC as the AC procures MH-60S.
Helicopter, Combat, MH-60S	MH-60S	-5			
Frigate, Guided Missile (Perry Class) Flight III	FFG	-1	-2	-3	Fleet continues decommissioning FFGs.
Landing Craft, Mechanized, Mark 8	LCM-8	-4			Due to planned unit disestablishment.

FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 Planned Transfers & Withdrawals							
Aircraft, Fighter, F-5N (Freedom Fighter)	F-5N	+1	+1				
Aircraft, Fighter, F-5E (Freedom Fighter)	F-5E	-2	-2				
Ship, Mine Countermeasures (Avenger Class)	MCM 1 Class	-2	-2				
Ship, Mine Hunter, Coastal (Osprey Class)	MHC 51 Class	-4	-4				
FY 2008 P-1R Equipment							
Modification of Aircraft							
H-53 Series				$7,318,000	$7,268,000		
Cargo/Transport A/C Series				20,903,000	20,761,000		
Small Boats							
Standard Boats				1,043,000	880,000		
Civil Engineering Support Equipment							
Passenger Carrying Vehicles				503,000	4,739,000		
Construction & Maintenance Equipment				390,000	590,000		
Fire Fighting Equipment				306,000	303,000		
Tactical Vehicles				9,671,000	9,640,000		
Civil Engineering Support Equipment - Items under $5M				534,000	529,000		
Supply Support Equipment							
Materials Handling Equipment				1,417,000	1,407,000		
Command Support Equipment							
C4ISR Equipment				7,932,000	7,866,000		
Physical Security Equipment				1,703,000	1,688,000		
FY 2008 Title III NGREA Equipment							
Construction Equipment for Reserve Support Sites (RSS)						$10,000,000	$10,000,000
C-40A Winglet (Sets)						7,500,000	7,500,000
Tactical Vehicles for Seabee Units and RSS						6,000,000	6,000,000
Weight Handling Equipment (Cranes)						4,000,000	4,000,000
Twin General Luffing (TGL) Series Hagglund Cranes for Cargo Handling Battalions						3,800,000	3,800,000
Items Under $5M - Kits						3,675,000	3,675,000
Maritime Prepositioning Force Utility Boats (MPFUB)						3,484,000	3,484,000
Information Systems Security Program (Identity Access Device - Remote Access)						1,498,500	1,498,500
Tactical Vehicles for EOD Operational Support Units (EODSUS)						1,062,000	1,062,000
Trucks - Trailers						1,012,000	1,012,000
C-40 Oxygen Walk Around Bottles						1,000,000	1,000,000
Construction Equipment for EOD Units						440,000	440,000
Rough Terrain Forklifts for EODSU SEVEN and MESF Units						426,000	426,000

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Light Service Support Vehicles (LSSVs) for MESF Units						300,000	300,000
Standard Boat for EODSU SEVEN						140,000	140,000
Items Under $5M - Trucks for EOD Units						128,000	128,000
Floodlight Sets for MESF Units						110,000	110,000
15-Passenger Vans for MESF Units						76,000	76,000
4x2 Vans						44,000	44,000
Total				**$51,720,000**	**$55,671,000**	**$44,695,500**	**$44,695,500**

USNR

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 2012 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution To Satisfy
Major Item Equipment Requirements

Significant Major Item Shortages

\multicolumn{6}{l}{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	C-40A	17	5	$81,700,000	$408,500,000	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. Program has suffered repeated offsets over the last few years.
2	Naval Construction Force (NCF) Tactical Vehicles and Support Equipment Table of Allowances (TOAs)	Various	Various	Various	$38,000,000	Funds would improve NCF readiness by providing tactical communications equipment, containerization support, tent camp facility support and weapons optics to fill shortages in TOAs which are aligned to train RC for deployment at Reserve Support Sites.
3	Navy Expeditionary Logistics Support Group (NAVELSG) TOA Equipment	Various	Various	Various	$75,000,000	Funds 3 FO1 Navy Cargo Handling Battalion (NCHB) sub-components over a 3 year period starting in FY 2012
4	Explosive Ordnance Disposal (EOD) TOA Equipment	Various	Various	Various	$58,898,306	Funds would improve EOD readiness by providing diving equipment, body armor, infantry gear, communications equipment, special tools, dive support boats, scuba fly-away kits, and robots required to support EOD operations.
5	Maritime Expeditionary Security Force (MESF) TOA Equipment	Various	Various	Various	$119,000,000	Replacement of over-aged tactical vehicles, civil engineer support equipment (CESE), patrol boats, and communication equipment required to improve operational readiness in support of OCO.
6	P-8A	12	5	$224,600,000	$1,123,000,000	Procures five P-8A s to fill patrol, reconnaissance, and intelligence gathering capability gap. P-3C red stripe grounding projected to accelerate throughout the service life of the remaining 12 RC P-3Cs (35 RC aircraft transferred to AC that mitigate the 31 AC aircraft struck in 2008). Increased demand on P-3Cs forcing transition sooner than anticpated.

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
7	KC-130J	5	5	$84,000,000	$420,000,000	Procures KC-130J aircraft for the Navy RC. These aircraft will fill the shortfalls in the Navy Unique Fleet Essential Airlift (NUFEA) inventory bringing it to the NAVPLAN 2030 redline. Navy C/KC-130T RC fleet is currently short of required wartime capability requirements, reducing lift capability for personnel, medical evacuation, and cargo transport. Avionics Modernization Program (AMP) for C/KC-130T was cancelled Apr 2008 due to competing priorities of the Naval Aviation Enterprise, USMC divestiture, and KJ procurement strategy.
8	F/A-18E	24	24	$55,089,000	$1,322,136,000	Accelerates transition currently slated to commence in 2016 and cuts fleet strikefighter shortfall. With 28 RC aircraft transferred to AC as shortfall mitigation strategy, the current 24 F/A-18A+ aircraft are not network centric warfare capable, non-deployable, red only assets. Avoids upgrade (ECP-560R4) to twilight F/A-18A+.
9	F-5 Radar/Electronics	44	44	$1,956,818	$71,600,000	Addresses 63% DoN shortfall for radar-equipped adversary support. Evolving threats and DoN counterair tactics require radar equipped F-5s to provide required level of support 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.
10	Maritime Civil Affairs & Security Training (MCAST) Command TOAs	Various	Various	Various	$883,573	Equipment required in support of tasked military operations including OCO, humanitarian assistance, and disaster relief. No RC equipment currently exists.

Chapter 5
United States Air Reserve Components

I. United States Air Force Overview

A. Air Force Planning Guidance

The 2010 Air Force Posture Statement "presents our vision of Global Vigilance, Reach, and Power as a vital component of the Joint team, defending our National interests, and guided by our core values of Integrity First, Service Before Self, and Excellence in All We Do." The Air Force achieves this vision through the synchronized efforts of the Regular Air Force, Air Force Reserve (AFR), and the Air National Guard (ANG).

The Air Force mission and the accompanying leadership priorities support the Joint mission and provide planning guidance for execution:

- Air Force Mission: "Aim High … Fly-Fight-Win"

- Leadership Priorities

    - Continue to Strengthen the Nuclear Enterprise

    - Partner with the Joint and Coalition Team to Win Today's Fight

    - Develop and Care for Airmen and Their Families

    - Modernize Our Air and Space Inventories, Organizations, and Training

    - Recapture Acquisition Excellence.

In today's demanding, complex, and uncertain environment, the Air Force achieves its vision, mission, and leadership priorities through the efficient incorporation of the Reserve Component (RC). Historically, the Air Force has led the Department of Defense in maximizing the value of the RC, most notably through associating units from the Active Component (AC) and RC. In recent years, the Air Force has institutionalized this process in Total Force Integration initiatives and now in the broader view of Total Force Enterprise—an analytical framework used to provide insight into the mix of AC and RC.

B. Air Force Equipping Policy

Strategic placement of Air Force assets, such as aircraft, is determined through corporate level processes involving both the AC and RC. Modernization of aircraft, more commonly seen, is addressed through a partnership between the requirements of the lead command for mission capability as well as requirements determined by the RC to meet assigned missions.

The funding to acquire equipment, i.e., aircraft and aircraft modernization for the RC, to meet new/emerging requirements can be accomplished in several ways:

- The Air Force plans, programs, and budgets for the procurement, transfer, and modernization of RC weapons systems through the Corporate Structure.

- Congress authorizes the Air Force and appropriates funding to fulfill specific RC requirements.

- Congress authorizes additional single year procurement funding through the National Guard and Reserve Equipment Appropriation (NGREA).

- Congress adds additional funding to the Air Force procurement account specifically for RC equipment.

The Air Force actively works to meet the equipment needs of the RC. Corporate processes are used to strategically place aircraft and lead command and RC requirements are used as the basis for modernization. These efforts ensure a mission-ready, mission-capable force to meet the Air Force's vision, mission, and priorities to support the Joint Force.

C. Plan to Fill Modernization Shortages in the RC

The Air Force continues to support the recommendations set forth in the Commission on the National Guard and Reserves final report, published in January 2008, titled *Transforming the National Guard and Reserves into a 21st Century Operational Force*. This report recognized the RC transition from a purely strategic force designed to meet Cold War threats to an operational force: "This operational reserve must be readily available for emergencies at home and abroad, and more fully integrated with the active component."

The Air Force champions many of the transformational concepts outlined in the report and, through continued partnerships between the AC and RC, mission-enabling requirements are identified, prioritized, and funded across the Air Force spectrum.

D. Initiatives Affecting RC Equipment

1. 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 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 Air and Space Operations Center (AOC) infrastructure and integrate C2 and intelligence, surveillance, and reconnaissance (ISR) capabilities through software and hardware improvements to the AOC-WS baseline.

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

a. Re-engining

This modification upgrades four JSTARS aircraft with a new Propulsion Pod System. 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 plans to improve the capabilities of the aircraft

with respect to thrust; thereby improving time to climb, time on station, service ceiling while on station, and fuel efficiency.

3. Remotely Piloted Aircraft (RPA)

a. MQ-1/9 Ground Control Station (GCS) Improvements

Future GCS Block improvements will provide for ground control station modernization and improve pilots/sensor operator ergonomics through architecture that is upgradable to network warfare capabilities. Improvements will focus on human factors to provide intuitive, pilot-like controls, advanced visualization, and streamlined information presentation for crews. The advanced cockpit will use an open architecture to allow full integration of aircraft, sensor, and weapons control.

b. Sense and Avoid Capability

Airborne Sense and Avoid is currently under development for large (group 5) RPA systems and will be scalable to medium (group 3 and 4) RPA systems as the long-term solution to reduce the potential for mid-air collisions—actions critical for RPA integration into the National and International Airspace Structures. As an interim solution, the Air Force is investigating a Ground Based Sense and Avoid solution, which will incorporate several military and Federal Aviation Administration (FAA) systems to produce a ground-based radar picture. This solution will provide the RPA pilot situational awareness of other military, commercial, and general aviation aircraft in the vicinity of RPA operations.

4. B-52 Stratofortress

a. Combat Network Communications Technology (CONECT)

The CONECT program is intended to significantly upgrade B-52 communications capabilities and crew information management. CONECT provides a new digital infrastructure to the aircraft to incorporate integrated communications capability, in-flight conventional weapons retargeting, aircraft and weapon mission retasking, improved operator interface design, and an enhanced situational awareness environment to support conventional weapon delivery functions in a more efficient, versatile, and timely manner.

b. B-52 Extremely High Frequency

B-52 Extremely High Frequency will integrate and outfit the fleet with equipment to provide secure and nuclear survivable two-way satellite communications for Emergency Action Messages and reportbacks to meet Joint Chiefs of Staff nuclear protected Information Exchange Requirements.

c. Strategic Radar Replacement

The B-52 Strategic Radar Replacement program is a non-developmental radar replacement program that will take advantage of the advanced capabilities naturally inherent in modern radars and will maximize commonality with other platforms.

d. Military Standard 1760 Internal Weapons-Bay (1760 IWB) Upgrade

The 1760 IWB upgrade will modify the aircraft software and hardware to carry and employ Global Positioning System (GPS)-guided "smart weapons" from the B-52 internal weapons bay while providing a 20 percent increase in B-52 range and reducing aerial refueling requirements.

e. Advanced Targeting Pod (ATP)

The B-52 ATP program fully integrates Sniper or LITENING targeting pods by altering aircraft software and linking pod control, display, and target geo-location with the aircraft's Offensive Avionics System. A fully integrated targeting pod improves timely support of friendly ground forces requesting fire support.

5. C-130 Hercules

a. C-130 Avionics Modernization Program (AMP)

AMP Phase I and AMP Phase II will standardize and modernize cockpit configurations and avionics suites across the current C-130 fleets to meet the U.S. and international Communications, Navigation, and Surveillance (CNS)/Air Traffic Management (ATM) mandates.

6. KC-135R Stratotanker

a. Avionics Obsolescence Upgrades and Safety of Flight Modifications

These programs address reliability, maintainability, and obsolescence issues to keep the aircraft viable until 2040. Modifications include Block 45 which replaces current equipment with Digital Flight Director, Digital Radar Altimeter, Digital Autopilot and Electronic Engine Instrument Display, Enhanced Surveillance replacing APX-100 with APX-119 transponder, Global Air Traffic Management, an upgraded avionics suite that meets the requirements for aircraft interoperability in the future aerospace environment, DoD-mandated Identify Friend or Foe system Mode 5, and the VHF omnidirectional radio (VOR)/instrument landing system antennae that replace the obsolete VOR antenna.

7. C-5 Galaxy

a. Avionics Modernization Program (AMP)

AMP is Phase I of a two-part modification effort to update C-5 aircraft with modern digital avionic systems. AMP replaces unreliable and unsupportable engine/flight instruments and flight system components. It also installs CNS/ATM and SecDef-directed navigation and safety modifications for the Terrain Awareness and Warning System and Traffic Alert and Collision Avoidance System.

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

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 TF39 engine with the General Electric F138-GE-100. The new engine meets Stage III noise and emissions standards while improving payload capability and time-to-climb capability 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.

8. C-17A Globemaster III

a. Block 13 to 17

This modification effort incorporates Block 14 Mobility 2000, 15 Communication Open System Architecture, 16 Weather Radar Replacement, and 17 Formation Flying System projects into one integrated retrofit work package into the Block 13 baseline for 152 C-17 aircraft to facilitate a homogeneous configuration. This project is accomplished in conjunction with the Extended Range (ER)/Onboard Inert Gas-Generating System (OBIGGS II) modification when possible.

b. OBIGGS II

The second generation OBIGGS is a new system that quickly and efficiently makes the gases in the fuel tanks inert, thereby preventing them from exploding if hit by enemy fire. In addition, the new system reduces the aircraft's weight by almost 500 pounds. The retrofit effort includes structural improvements to the wing and fuselage and changes to subsystems and software. This redesign significantly increases system effectiveness, utility, and maintainability and reduces life cycle costs.

c. ER/OBIGGS

This project adds the ER fuel containment system and OBIGGS II to 70 C-17 aircraft. An additional 67 C-17 aircraft already equipped with ER will receive OBIGGS II with the OBIGGS II modification. ER adds a center wing fuel tank, increases the fuel capacity by 9,500 gallons, and adds 1,800 pounds to the empty weight of the aircraft.

d. Large Aircraft Infrared Countermeasures System (LAIRCM)

LAIRCM provides a significantly improved defense capability for the C-17 to counter infrared (IR) man-portable air defense systems (MANPADS) missile threats. This defense system is fully automatic following power-up.

9. F-15 Eagle

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

The APG-63(V)3 AESA radar upgrade provides significant improvements in detection, tracking and engagement of multiple threats as well as improvements in system reliability and maintainability.

b. Very High Speed Integrated Circuit Central Computer (VHSIC CC) Plus (VCC+)

The current F-15C/D VHSIC CC, which runs the software needed to operate the aircraft, has reached its maximum throughput, processing power, and memory. The VCC+ program extends the life of the current computer by adding additional processing and memory cards.

10. F-16 Fighting Falcon

a. Falcon Structural Augmentation Roadmap

The Falcon Structural Augmentation Roadmap program will 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.

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 (SLOS) communications and emerging requirements for image transfer and beyond line-of-sight (BLOS) connectivity.

c. Commercial Fire Control Computer

The Commercial Fire Control Computer is critical to 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, and Mode V advanced combat identification features.

11. F-22 Raptor

a. Common Configuration

This program includes numerous hardware modifications to reduce F-22 fleet configurations from six to three. This will increase combat capability of the fleet and provide efficiencies in research, development, test, and evaluation (RDT&E) and sustainment.

b. 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 Small Diameter Bomb integration and AIM-120D and AIM-9X integration.

c. Block 35

This program incorporates the Enhanced Stores Management System on Block 30 jets, enabling weapons incorporation to the earlier jets. This will bring the number of F-22 combat-coded jets from 87 to 150.

d. Reliability and Maintainability Maturation Program (RAMMP)

This program modifies hardware on existing F-22s to increase the fleet's reliability, availability and maintainability. It is the only program that will allow the F-22 to attain its Operational Requirements Document requirement of 3.0 hours Mean Time Between Maintenance by 100,000 fleet hours. Furthermore, the materiel improvements funded within RAMMP will increase aircraft availability by 7.9 percent by 2015. This program includes 80+ active development and retrofit projects.

e. F119 Engine Modifications

The F-22 Raptor F119 engine modification program is designed to improve the overall safety, reliability, maintainability, and reduce total ownership costs. Some of the modifications in

FY 2012 include upgrading the number one, two, and three bearing compartment scavenge tubes to eliminate oil leaks and unscheduled engine removals; modification of the Buffer-Air Heat Exchanger and the 5th Stage Rotor, which are the program's number one and two highest scheduled engine removal drivers; and safety improvements to the main oil pump and the gearbox eliminating engine in-flight shutdowns for these issues.

12. A-10 Thunderbolt II

a. Precision Engagement

The Precision Engagement program transforms the A-10 cockpit as well as the aircraft's capability by delivering 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 Air Force's 346 A-10 aircraft, 233 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.

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 IR surface-to-air missiles (SAM). The AN/AAR-47 is a passive missile-approach warning system that will notify the pilot when a SAM is launched and will automatically dispense countermeasures.

E. Plan to Achieve Full Compatibility between AC and RC

The Air Force continues to provide a balanced portfolio of capabilities across the twelve Air Force Core Functions by maximizing the use of AC and RC forces. The analytical framework provided by Total Force Enterprise will provide insight into the right mix of AC and RC, and the tactical application of Total Force Integration initiatives will further build synchronicity.

This integrated approach, combined with lead command and RC requirements driving aircraft-related spending, will ensure the Air Force is ready to support the Joint Team as it meets the challenges of the future.

II. Air National Guard Overview

A. Current Status of the Air National Guard

1. General Overview

The Air National Guard (ANG) has a rich history of integrating and operating with civilian authorities and the United States Air Force in defending and protecting the interests at home and abroad for America and her citizens. Since its founding, the ANG has proven itself an integral part of Air Force capability. DoD 5105.77, *National Guard Bureau (NGB)*, May 21, 2008, makes significant provisions for increasing

> **Top ANG Equipping Challenges**
>
> - Modernizing aging aircraft and other weapons systems for both dual-mission and combat deployments
>
> - Equipment to satisfy requirements for domestic operations in each Emergency Support Function (ESF)
>
> - Define an Air Force validation process for both federal and state domestic response needs

the influence of the National Guard in matters of support of civil authorities and in conjunction with the FY 2008 National Defense Authorization Act (NDAA), grants the NGB the authority to facilitate and coordinate the use of non-federalized National Guard forces for operations conducted under Title 32, or in support of state missions. National Guard Support of Civil Authorities (NGSCA) refers to the use of National Guard personnel and resources for operations conducted under Title 32, or in support of state missions. The equipment used by the Guard to support these state missions is the same equipment used to support federal missions. NGSCA is considered a subset of defense support of civil authorities (DSCA) as defined in the National Response Framework. Ongoing overseas commitments and expanding domestic responsibilities for the ANG, has resulted in the ANG responding to international disasters, like Haiti, along with responses to numerous domestic disasters throughout the country, while continually augmenting the AC with an operational force for contingencies around the globe, including Iraq and Afghanistan.

The ANG provides almost half of the Air Force's (AF's) tactical airlift support, combat communications functions, aeromedical evacuations, and aerial refueling. In addition, the ANG currently has the responsibility for 16 of 18 air defense operations for the 54 states and territories of the United States. When ANG units are not directly supporting the AF, the ANG under the provisions of state laws, provides protection of life and property and preserves peace, order, and public safety. The ANG accomplishes these missions through emergency relief support during natural disasters, such as floods, earthquakes, and forest fires; search and rescue operations; support of civil authorities; maintenance of vital public services; and counterdrug operations. To that end, the ANG has continually been called upon to support state governors and civil authorities for border patrols, hurricane relief, firefighting efforts, floods, earthquakes, and diverse security operations for events such as Super Bowls and Presidential inaugurations.

The operations tempo for the ANG has been high and prolonged, driving a need to concurrently modernize and recapitalize our aircraft fleets, a need shared by the AC. Due to the Air Force Total Force concept, we have been extremely successful at modernizing our legacy aircraft and providing upgraded "tools of the trade" for our Airmen through a capabilities-based requirements

and acquisition program. This program has kept us prepared, applicable, and dependable in domestic operations as well as combat operations.

2. Status of Equipment

The FY 2008 NDAA, Sections 351(a) and 351(c)(1), "Reports on National Guard Readiness for Emergencies and Major Disasters," require an assessment of the extent to which the National Guard possesses the equipment required to support operations in an emergency or major disaster. Refer to Appendix B for greater detail.

Though issues of force structure, resources, and funding have long been the subject of debate among DoD senior leaders and lawmakers, today these issues are framed by an unprecedented push to improve the way the Air Force utilizes and equips the RC. This is evident in the equipping strategy the Air Force has taken with the ANG. Currently, the ANG has an unprecedented support equipment readiness rating of 92 percent, as compared to rates of 84 and 88 percent just a few years ago. This rate is comparable to the overall Air Force availability rate and is achieved through the ANG and Air Force's teaming to equip the ANG as an operational reserve force. ANG equipment is typically procured in support of federal missions with authorizations that are aligned to Tables of Allowances (TAs), which prescribe the equipment necessary to perform federal missions. The ANG leverages these TAs for both vehicles and aircraft support equipment for its responsibilities to meet both federal and NGSCA missions. Equipment priorities are determined in a Total Force environment, where the forces with the most pressing operational need get first priority, no matter which component owns those forces. Although the equipment readiness level is an aggregate 92 percent of authorized equipment, shortages do exist. The challenge is to obtain the assets that are most critical for the warfighter and military first responder for homeland operations. Approximately 88 percent of the assets the ANG possesses are considered "dual-use" (federal and NGSCA missions). In addition, the ANG aligned all dual-use equipment and vehicles into the "Essential 10" categories. These are 10 core capabilities needed to respond to emergencies and major disasters in the United States. These "Essential 10" capabilities are: C2, chemical, biological, radiological, nuclear, high-yield explosives (CBRNE) consequence management, engineering assets, communications, transportation (surface), aviation/airlift, medical, security, logistics, and maintenance.

a. Equipment On-hand

i. Current Status

The majority of ANG equipment is classified as "dual use." Recent data indicates the ANG is approximately 8 percent short of filling its equipment requirements, as calculated from items in use/on-hand versus items authorized.

ii. ANG Equipment On-hand

Overall, the ANG has 92 percent of all equipment on-hand and available for NGSCA and federal operations. Refer to *Table 1* in Appendix B for detailed information on equipment on-hand.

a) Average Age of Major Items of Equipment (MIE)

Overall, the average age of aircraft MIE within the ANG is 26.6 years. See *Table 2* for the average age of selected MIE. The aging fleet could negatively impact DSCA missions before affecting ANG federal missions.

b) Compatibility of Current Equipment with AC

The Air Force continues to develop corporate level (Lead Command) management of aircraft tails. However, the ANG position is that unit ownership of specific tails promotes quality maintenance (aircraft availability) and unit cohesion. Additional detail is provided in the "Modernization Programs and Shortfalls" section of this report.

c) Maintenance Issues

The NGB Aircraft Maintenance staff's concern about sustaining legacy systems has led to the establishment of a Weapon Systems Sustainment Working Group. The charter of this group is to identify equipment sustainment shortfalls, prioritize them, and advocate for mitigation. Maintenance issues identified by the group include the following.

i) C-5 Sustainment and Modification Requirements

- C-5 Aft Crown Skins—indicators show signs of cracks beyond current inspection criteria which led to the use of a Magnetic Optical Imaging (MOI) technique every 840 days. An overdue 840 day inspection will result in a 65 percent operating restriction. Twice overdue will constitute an 80 percent operational restriction. These restrictions should never occur again since the ANG units have their own MOI equipment. Estimated cost of the 26 skin replacement is $10.2M per aircraft. Once funding is received, replacements will occur at Warner-Robins Air Logistics Center or Lockheed Martin.

- C-5 Contour Box Beam Fitting—inspections revealed cracks in this critical structural component. Aircraft with cracks are limited to 6.0 PSI and 25,000 feet and operationally restricted to local missions. Lockheed has developed a replacement technique for the fittings and has started replacements. Cost to replace is $3.1M per aircraft. Without additional funding, aircraft grounding will affect aircraft availability.

ii) Flight Line Generator (72kW)

The 72kW generator can be overhauled to like new condition from the depot at Hill Air Force Base (AFB) with a cost of $54K per generator. The new 72kW generator is currently not scheduled to be shipped until 2013.

d) Modernization Programs and Shortfalls

1. The ANG's modernization efforts are founded on capability requirements validated by the Air Force and combatant commanders. Critical capabilities are developed and vetted in an open and rigorous forum of war fighters, who are experts in their respective weapons systems, at an annual Weapons and Tactics Conference and approved by the Director, ANG. The capability requirements are translated into specific programs that are commercial or government off-the-shelf, and require only non-developmental integration into a weapons system. The process includes C2 and ISR systems as well as weapons

delivery, airlift, and tanker platforms. These capabilities and associated programs are documented in the annual *Weapons Systems Modernization Requirements Book*. This process has documented a $7B shortfall for modernization and recapitalization of the ANG aircraft fleet.

2. In August 2010, the ANG hosted its second annual Domestic Operations Equipment Requirements (DOERs) conference. The objective of the conference was to define, validate, document, and prioritize materiel capabilities needed by ANG units to support civil authorities at all levels of government. Over 400 experts from all 54 states and territories as well as experts from staff agencies and leading defense contractors used a bottom-up approach to determine capability shortfall prioritization. These experts defined both materiel and non-materiel needs using the Department of Homeland Security's Emergency Support Functions (ESFs) functional alignment. The ANG will use the direct output from this conference to publish the annual *Domestic Operations Equipment Requirements (DOERs) Book*. The DOERs Book is organized using the ESFs of the National Response Framework to ensure the states, federal and state agencies, Congressional leaders, and NGB staffs understand the connections to our local communities and states. It will serve as the source for rationale for supporting and informing both DoD and DHS budgeting processes as well as serve as the list from which other funding received by the National Guard can be prioritized.

i) A-10

The AAR-47 is a passive, missile-approach warning system that detects missile launches from 360 degrees around the aircraft and automatically dispenses counter-measures. This program is fully funded. A second ARC-210 radio, which allows simultaneous SLOS capability with ground troops and BLOS communication with C2 was fully funded using $5.34M of FY 2008 and FY 2009 NGREA funds to fill a Central

A/OA-10 Attack

Command (CENTCOM) urgent operational need for a deployment to Iraq, and $4.6M FY 2009 overseas contingency operations (OCO) funds to equip the remainder of the ANG A-10 fleet.

Due to funding constraints, the ANG A-10 fleet will have the following modernization shortfalls in FY 2012. 1) The combined F-16/A-10 helmet-mounted integrated targeting system (HMIT) contract was awarded in May 2010 and integration and testing is ongoing. Production and installation for the first two of five A-10 squadrons is available; $9.45M is required to equip the remaining three ANG squadrons. 2) The digital radar warning receiver (RWR) will significantly improve all RWR functions, reducing response times to threats and will require $26.6M to start the program. 3) The electronic attack (EA) pod upgrade that will enhance self-protection against current and emerging threats will require $18M. 4) The A-10 engine upgrade or replacement has been identified as a critical need for years but no program exists to redress the deficiency, with $75.25M needed to start this unfunded effort. 5) $8M for the Lightweight Airborne Recovery System (LARS) Radio V12–an upgrade that increases combat search and rescue situational awareness.

ii) C-5

C-5A Strategic Airlift Aircraft

AC and AFR C-5B/M aircraft are modified with aircraft defensive systems (ADS) which permit operations in hostile environments. ADS for ANG aircraft was funded and is awaiting installation with anticipated completion in FY 2014. Without ADS, ANG C-5A aircraft were not permitted to enter certain airfields in the CENTCOM area of operations. Additionally, the lack of ADS decreases aircraft available to meet certain mission taskings, and increases the threat of undetected MANPADS launches. Due to funding constraints, the ANG C-5A fleet will have the following modernization shortfalls: 1) Stress corrosion cracking on the aft crown skin limits the cargo load factor to 80 percent and will be adjusted according to severity of the cracking. Total C-5A fleet cost to replace the aft skin is estimated at $297M. 2) Advanced IR countermeasure (IRCM) self-protective suite for $320.7M: Aircraft must be modified with ADS before any modification for the more advanced and effective LAIRCM can go forward.

iii) C-17

C-17 Strategic Airlift Aircraft

Installation of LAIRCM is still top priority. All eight ANG C-17 aircraft are funded by the FY 2009 and FY 2010 supplemental appropriations to receive LAIRCM upgrades. Currently, the LAIRCM contract is under renegotiation and the production line should resume in early FY 2011.

iv) C-130E/H

Active duty and ANG C-130s operate worldwide in a low to medium threat environment where advanced defensive systems and situational awareness capabilities are required. ANG continues to work with Congress and Air Mobility Command (AMC) to fund the remaining 5 C-130 units with LAIRCM. Real time information in cockpit (RTIC) capability will provide timely information to aircrews' so they can participate in the present day network-centric battle space and greatly increase survivability in combat operations. The RTIC program is currently in source selection with flight testing expected in the spring-summer of 2011. Virtual Electronics Combat Training System (VECTS) is fully funded and IR defensive system testers are a priority for the entire C-130 fleet, and delivery of the final design is expected in late FY 2010. Active noise cancellation systems reduce cockpit noise, decrease crew fatigue, improve inter-crew communications on the flight deck, and increase operational readiness and have been funded through NGREA and Congressional adds for 14 aircraft. Additional funds are required to modify the entire fleet. Additional C-130 modernization capabilities vetted on the requirements matrices but currently only partially funded through NGREA include loadmaster seats and surface-to-air fire lookout capability.

v) C-130J

C-130J

The C-130J brings major system improvements including: advanced two-pilot flight station with fully integrated digital avionics, color multi-function and head-up displays, state-of-the-art navigation systems with dual inertial navigation system and GPS, digital moving map display, and new turboprop engines with six-bladed, composite propellers. Current unfunded modernization requirements for the ANG C-130J fleet and only

partially funded for the entire mobility air forces (MAF) fleet include: LAIRCM, AAR-47 Missile Warning System (MWS) improvement, and loadmaster crashworthy seats. Additionally, Surface-to-Air Fire (SAFIRE) Lookout capability is unfunded for the MAF fleet.

vi) EC-130J

LAIRCM is fully funded for the EC-130J fleet. Current unfunded requirements include: satellite communications (SATCOM) installation for compatibility and interoperability with other special operations forces assets and theater C2, wideband satellite connectivity for timely and effective psychological operations broadcast capability, and direction finding equipment to improve transmission targeting.

vii) LC-130

The ANG is working with the Navy on developing a replacement jet-assisted takeoff (JATO) motor but, due to high costs, we are exploring an alternate, less costly approach. The ANG is completing testing on an 8 bladed propeller variant for the C-130. Data from the flight testing indicates the new propellers should significantly reduce our reliance on the JATO for deep field missions. Congress provided partial funding and additional NGREA funding rounded out the program. Additional funding is required to completely equip and support all the LC-130s. Another program the ANG is supporting is a radar system designed to identify hidden crevasses in snow covered areas prior to landing. Congress provided funding in FY 2008 and the production program is scheduled for completion next year.

viii) HC/MC130

HC/MC-130 Combat Rescue Aircraft

Currently, there are no equipment compatibility issues between the active force and the ANG HC/MC130s. The ANG began a NGREA-funded program for its nine HC-130s and four MC-130s which upgrades its existing personnel locater system to the AN/ARS-6 LARS V12 capability. The Air Force is funding a communications and data link upgrade for all ANG HC/MC-130 aircraft; contract award is expected in FY 2011. Expected modernization shortfalls for the upcoming FY and through FY 2013 include crashworthy loadmaster seats for all ANG aircraft and dual rail cargo handling capability for a portion of the ANG aircraft.

ix) E-8C, JSTARS

The JSTARS system has the attention of the highest levels of AF and Army leadership. An Analysis of Alternatives is underway to determine if continued investment in the E-8C is of value or if the AF should pursue other alternatives to field JSTARS capabilities. Until that decision is made, the ANG continues to address current operations priorities. An example is an effort to modify the communications suite with an integrated chat capability to support an urgent operational need for the CENTCOM area of responsibility (AOR). Engine failures are the number one maintenance issue driving the search for solutions.

x) F-15

The F-15's number one modernization priority is the APG-63(v)3 AESA radar. The AC is also modernizing its F-15s with the same (v)3 radar, so no compatibility issues exist. The FY 2008 and FY 2009 bridge emergency supplemental added $34M to this ANG effort and placed four AESA radar systems on contract for the ANG. For FY 2010, the ANG received $32M to keep the (v)3 production line open and field an additional four AESA radar systems at Barnes, MA to operate with the Northeastern U.S. Air Defense Sector. To date, 22 AESA systems are funded for the ANG out of a total requirement of 48. The ANG F-15C community is pursuing procurement of SATCOM radios to fulfill an Air Force Northern Command (NORTHCOM) urgent operational need for BLOS capability. ARC-210 SATCOM radio fulfills this requirement and is already fielded and sustained in other ANG and AC fighters. ANG is working with the program office to field an initial stand-alone, non-integrated capability in 2011 funded with NGREA to meet the most urgent need at air sovereignty alert units. AC is planning to fund the remaining aircraft and develop a fully integrated installation in FY 2012–2013.

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

xi) F-16

Modernization efforts are underway to improve the contingency war fighting and HD capabilities of ANG F-16s by fielding SLOS and BLOS communications suites, higher data rate processors, center console display unit (CDU), HMIT, enhanced self-protection suites, improved radar performance and reliability, and the advanced identification friend or foe (AIFF). NORTHCOM has identified AIFF and BLOS communications as critical requirements for HD. NGREA funding successfully initiated the HMIT, CDU, and AIFF programs. However, the lack of funding for HMIT and CDU in the current Air Force program objective memorandum (POM) generates significant risk for the procurement of these systems in FY 2013 and beyond. These are critical programs to achieve targeting and performance capability in parity with the AC fleet. The first increment of a SLOS/BLOS capability was funded primarily by the Air Force. ANG is currently working on the next increment that will enable simultaneous C2, intra-flight, and air-to-ground communications required in-theater. The F-16 critical combat priorities are: 1) HMIT, 2) center display unit, 3) radar enhancements with robust air-to-ground and air-to-air detection and identification, 4) improved radio-frequency/IR detection and self-protection, targeting pod upgrades and enhancements, and 5) implementation of SLOS and BLOS communication systems capable of simultaneous operations.

*F-16 C/D
Fighter*

xii) HH-60G

The ANG HH-60G fleet is currently involved in an NGREA-funded program for an avionics upgrade and addition of a data link, which includes dual smart multi-function color displays and situational awareness data link (SADL). Flight testing was completed in summer 2010 and installation started September 2010. AF-funded programs include an improved aircraft hover, hold system. The ANG funded a defensive weapon upgrade for aircraft in Alaska that operate with skis.

*HH-60G Combat
Rescue Helicopter*

Expected modernization shortfalls in FY 2013 include a helmet-mounted cueing system and display to improve lethality and rescue mission success, and a multi-spectrum radio upgrade capable of interoperability during inter-agency operations to allow ANG helicopters to better integrate with civil authorities during domestic operations, such as fire fighting and disaster response.

xiii) KC-135

KC-135 Air Refueling Tanker Aircraft

Required changes in employment concepts place the KC-135 in high threat areas, and drive a requirement to add IRCM. The RC and AMC are working a combined test effort to determine a viable solution that meets the required performance parameters. Currently, there is no funding for IRCM on the KC-135. Numerous CNS/ATM compliance items, an integrated flight director/autopilot, and an electronic engine instrument display are included in the Block 45 upgrade. Other items listed as requirements, but not yet funded are tactical data link (TDL)/RTIC systems and enhanced external overt/covert lighting.

xiv) RPA

ANG units utilize a GCS provided by Air Combat Command (ACC), connected to a Squadron Operations Center (SOC) developed and funded by ANG, to control RPA. Current ANG RPA units are located in AZ, CA, NV, NY, OH (initial operational capability FY 2011), ND, and TX. In FY 2010, ANG had no funding for the RPA program and will be short $49M in FY 2011/2012 due to 7 upcoming SOC purchases ($7M each) as ANG RPA units stand-up to meet force structure requirements. As a result of SOC standardization, the current 4 SOCs will also need to be equipped to "plug in" to the joint fight; costing another estimated $8M total ($2M each). The shortfall is due in large part to the SOC not having a program element for funding associated with it. Additionally, the development of RPA testing in the ANG is critical, both for continued operational relevance and integration into national airspace for domestic operations. Looking forward, ANG will stand-up an additional 5 RPA units by FY 2013, either through a basing process or programmatic action. Furthermore, ACC will begin transitioning AC and ANG MQ-1 units to MQ-9 units in FY 2014. As these units transition and new units stand up, the ANG must aggressively pursue a "balanced and concurrent" mix of MQ-1 and MQ-9 relative to the AC.

xv) C-38

The C-38 has limited range, is becoming increasingly unreliable due to maintenance issues, and is expensive to operate due to diminishing manufacturing sources of aircraft parts. Replacing the C-38s will address several capability gaps identified in a capabilities-based assessment. Current requirements call for four small capacity executive support aircraft. Four aircraft would ensure consistent support and minimize the impact of unplanned maintenance.

xvi) C-40

LAIRCM systems have recently been installed on these aircraft. Other items currently being installed are Integrated Approach Navigation/Vertical Situation Display (IAN/VSD) and the Enhanced Vision System. The installation of IAN/VSD will bring the ANG C-40s to a common

configuration with the AFR C-40Cs. Another item of interest for the C-40C is high speed data internet, which would allow passengers to remain connected via non-secure internet and e-mail while airborne. Current requirements call for four C-40C aircraft. Four aircraft would ensure consistent mission support and minimize the impact of unplanned maintenance.

xvii) C-21

All 21 aircraft have been modified to comply with reduced vertical separation minimum (RVSM) airspace requirements. Enhanced Mode S (EHS) is currently required to operate in Europe; however, the C-21A has a waiver to operate without this equipment. The EHS modification is on hold, pending the outcome of the C-21 aircraft retirement decision.

C-21 Special Airlift Aircraft

xviii) Air Support Operations Group (ASOG), Air Support Operations Center (ASOC), Air Support Operations Squadron(ASOS)/Tactical Air Control Party (TACP)

This combat capability continues to struggle with the various stages of equipment modernization. Numerous critical mission assets are obsolete, non-procurable, or simply have not been fielded to the organizations; resulting in the units lagging behind their AC counterparts in critical mission areas. Continual technological advances in vehicles resistant to improvised explosive devices have made the selection of a standardized tactical vehicle extremely difficult and the lack of a decision has lead to

TACP in Action

a non-standard fleet. Shortfalls with the primary communications system (AN/MRC-144) and the testing and development of the replacement system leave many units unable to fill all mission requirements in support of Army mission areas. Industry-wide shortages of approved body armor have all organizations scrambling to equip their TACPs with the best available protective equipment capabilities just before deploying.

Prior modernization efforts have been augmented with NGREA funding to help meet the minimum requirements for basic TACP equipment shortfalls ($3M). ACC funding and fielding streams have not addressed all of the known designed operational capability (DOC) equipment requirements across the FYDP for ACC or the ANG. Current authorized tactical vehicles are not adequate for theater use, and many lack appropriate or critical communications assets. The current partially-funded vehicle communications system (VCS) is not a form, fit, or function replacement for the AN/MRC-144 communications system, nor is it meeting tactical communication requirements for TACP operations. Ongoing VCS testing continues to uncover capabilities shortfalls resulting in programmatic delays and questions the wisdom for fielding this system. Without quick programmatic actions for a bridge system, the existing NGB equipment shortfalls will continue to be drawn out beyond the FYDP for ANG ASOC/TACP units. Continued critical shortfalls of the releasable body armor vest ($1.4M–$2.25M, FY 2010–2013) have made it extremely difficult to train under realistic conditions and to have available when called to duty.

xix) Control and Reporting Center (CRC)/Air Control Squadron (ACS)

Lack of funding constrains efforts to streamline the battle management C2 capability to become an extremely agile and rapidly deployable weapon system. A shortfall in standardized tactical vehicles ($55M), tactical generators ($27M), power distribution systems ($1.7M), and theater

deployable communication ($17M) equipment, has left the ANG without the required assets to meet its DOC tasking. Current combat air forces (CAF) funding and out-year projected funding streams do not address ANG shortfalls. Ongoing sustainment and modernization efforts for the legacy AN/TPS-75 radar ($36M service life extension program [SLEP]-$1B+ modernization) and AN/TYQ-23 (V5) operations module ($78M SLEP-$500M+ modernization) are critical to the overall C2 mission capabilities to meet domestic and tactical operational requirements today.

The ANG is developing an ANG-specific, commercial off-the-shelf (COTS), fully self-contained, deployable, short range sensor/radar and control capability to support HD, homeland security (HS), DSCA, and drug interdiction missions. The prototype will be a rapidly deployable asset that includes two remote short range radars, a mobile command post with four operator work stations to coordinate air assets, a communications suite, on-board heating, ventilation, air conditioning, and electrical power. Estimated cost for the capability is $3.5M.

xx) Component Numbered Air Force (cNAF)/Air and Space Operations Center

The ANG cNAF Integration/Augmentation mission area continues to grow and become more refined. The Full Training Capability (FTC) suite of training equipment has been fielded to all appropriate units. This capability provides the basis for mission qualification and continuation training, but requires further capabilities in order to meet all training needs. Specifically, installation of the Core Radio Package at each unit will provide more realistic training in both the Combat Operations and Joint Interface Control Cell (JICC). Additionally, full fielding of the Joint Interface Control Officer Support System or similar equipment is needed to provide training to the JICC personnel. Distributed Mission Operations (DMO) with connectivity to the DMO Network and Distributed Training Operations Center (DTOC) is critical to current and future training venues. Although the Joint Worldwide Intelligence Communications System is part of the FTC baseline, the communications infrastructure to support it and the other training systems must be more robust.

xxi) C2 Simulation and Distributed Mission Operations

ANG C2 units do not have direct access or connectivity to the AC DMO Network. However, units are connected to the DMO Network via a gateway at the DTOC. ACC fielded the combat reporting center simulation package to the CRC/ACS community for training mission crews. Similarly the ASOS/TACP community was equipped with the Indirect Fire Forward Air Controller Trainer (I-FACT) in limited numbers by ACC. Using NGREA funding ($1M), ANG equipped the rest of its units with this capability; however, the C2 communities require training for large force exercises to be on the same proficiency level as their AC counterparts. Force structure reductions dictate that the ANG use simulation and DMO for qualification training. Additional funding of approximately $25M is needed to acquire the next generation of ASOS/TACP trainers with upgraded distributed capabilities.

xxii) Simulation and Distributed Mission Operations

The ANG has a dual track process for acquisition and modernization of modeling and simulation systems across the spectrum of devices from the very robust, high fidelity simulator to lower end micro simulators. Each is designed for a specific training audience and purpose at the squadron

level. Partnering with AF research labs, technology centers, and industry, the ANG has deployed training systems, developed in house, with cutting edge technology at a fraction of the traditional program cost. *Selective Fidelity* provides levels of capability matched to specific aircrew requirements in a hybrid device. Some components may be high fidelity while others, of lesser importance to the mission, are low fidelity, resulting in a purpose built capability targeting a specific training audience and mission. The ANG also procures training systems directly from industry where the Lead Command has been unable to support mission-essential training capability. The near term simulation priorities include 2 additional F-16C Full Combat Mission Trainer centers with 8 devices; full funding for the KC 135 Boom Operator Simulation System with 15 devices; and initial funding for the Advanced Squadron Level Simulator program with 2 C 130H devices and 2 KC 135R devices.

xxiii) Cyber and Information Operations

The acquisition of equipment and connectivity to create virtual network ranges for information operations and network warfare operations training, tactics development, and tactics testing continues to present challenges for the ANG. These mission-specific items are the vital tools that ANG personnel require to train and fight in cyberspace. As high-tech industries develop most of the relevant technology for these ranges, the ANG's ability to keep pace with the tremendous improvements in technology require funding for procurement of new systems and the upgrade and technical refresh of existing systems. In FY 2010, the ANG received $1.7M through FY 2010 NGREA to field a Cyber and Critical Infrastructure Range for ANG units in Delaware, Rhode Island, and Kansas. Also in FY 2010, the Washington ANG received $2.0M through a Congressional mark to achieve full initial operating capability for the analysis and protection of critical network control systems, including refinement expertise, training of personnel, and conducting additional trial assessments. FY 2011 shortfalls have been identified for equipment to enhance existing or planned systems with the capability to conduct realistic cyber operations simulations at multiple security classifications and across multiple wireless technologies.

xxiv) RC-26B

The RC-26B faces a number of immediate modernization challenges including replacement of the flight deck avionics suite, replacement of the onboard mission system operator station, upgrade of the onboard communications suite (including incorporation of civil/law enforcement radios, antenna mounts, and TDLs); and an aircraft weight reduction to meet operational requirements. Additionally, the aircraft will soon need an advanced electro-optical (EO)/IR turret, upgraded power source, and an external, podded sensor capability.

These challenges are exacerbated by the fact that RC-26B is not a "normalized" program. The aircraft lacks a validated requirement, a Lead Command, and operates with no POM budgetary support. While the RC-26B has benefitted from Congressional adds in the past and limited budgetary support from customers outside the ANG, the ANG must support the majority of RC-26B needs out of execution year funds severely constraining modernization efforts.

The ANG's vision for the incident awareness and assessment (IAA)/ISR mission area would be an expanded fleet. These aircraft would fulfill a wide range of domestic incident response

missions, numerous missions defined in the Air Force information warfare concept of operations, and manned ISR taskings.

xxv) SENIOR SCOUT

Upgrade and modernization efforts funded in the SENIOR SCOUT program encompass Baseline 5 upgrades of three SENIOR SCOUT shelters. In addition to the program funding, five efforts funded with Congressional marks were initiated in FY 2010: Communications intelligence capability upgrade valued at $2.4M, EO/IR capability valued at $4.8M, Line-of-sight data link valued at $2.4M, Remote operations capability valued at $2.4M, and support equipment for time-critical targeting valued at $3.0M. Additionally, NGREA funded capability for radio frequency cancellation valued at $6.4M, ($1.25M with FY 2010 NGREA and $5.15M with FY 2009 OCO NGREA).

C-130 Carried SENIOR SCOUT

There are unfunded requirements in the area of direction finding frequency extension ($5.25M), wideband data recorder processing of $3.83M, and remote operations of $5.4M. Procurement funding is aggressively sought in the AF POM process to address the current shortfall of nearly $14M per year across the FYDP for approved requirements.

xxvi) Pararescue/Special Tactics

The ANG is using NGREA funds to integrate and procure ground mobility vehicles capable of meeting the expectations of current and future operations (FY 2010 $1.8M). NGREA has also been used to fund an alternative insertion and extraction suite vital to sustain and improve special operations capabilities

Special Tactics Team

for contingency and domestic operations (FY 2010 $1.8M). Finally, NGREA funds have been used for various combat rescue and domestic operations regarding medical equipment (FY 2008 $1.8M), laser range finders (FY 2008 $1.2M), and communication equipment (FY 2008–FY 2010 $4.1M). Shortfalls for the upcoming year and through FY 2014 for both Pararescue and Special Tactics will be vehicles, communication equipment, weapons suite upgrades, and airfield survey/assault equipment.

xxvii) Distributed Common Ground System (DCGS)

There are no compatibility issues between ANG and AC DCGS; however, there are compatibility issues between DCGS, Predator SOC, and theater units. Crew voice communications between the two weapon systems is required to maintain situational awareness during mission operations. Delivery of the crew communications suite to all ANG DGS sites will permit crew voice communications between the Distributed Ground Station (DGS) sites only, but not to the SOC.

Air Force Distributed Common Ground System (AF DCGS)

Another modernization effort underway within ANG DCGS

is the collateral enclave. This is a separate suite of equipment that can process, store, and disseminate information at the secret collateral level only. The highly classified nature of the current DCGS configuration prevents sharing of information with collateral-only customers. NGREA funds totaling $4.4M were committed for DCGS collateral enclave equipment purchases.

Adjunct to the classified information-handling capabilities of DCGS is the need for a releasable enclave. This is especially critical for ANG DCGS because of dual-use (federal and state) mission requirements. Having a releasable enclave will allow ANG DGS units to respond to and support HS, HD, and natural disaster recovery and rescue operations. A critical combat capability that remains unfunded is the DCGS wideband link, an alternate SATCOM downlink that backs up existing downlink sites on the East and West coasts.

xxviii) Security Forces

The ANG Security Forces (SF) lack specialized equipment and resources necessary to meet AF requirements for force protection. The shortfall includes: current generation weapons; surveillance, targeting, and night vision observation equipment; communications; and installation intrusion detection systems. The ANG SF has been successful in redressing this shortfall through the use of NGREA funding to modernize its equipment to ensure compatibility and interoperability. However, additional funding, regardless of source, is required to complete the process. Additionally, ANG SF has used available funds to acquire current generation combat training simulators, which have accelerated training and significantly improved proficiency with equipment and weapons. The savings in training costs and time is substantial, and makes the time spent on small arms ranges more productive.

xxix) Medical

The ANG maintains nine Block 11 Expeditionary Medical Support (EMEDS) +25 and +10 medical treatment platforms. The Air Force has upgraded to the new Block 12 EMEDS in FY 2010. Additionally, we have significantly modified the CBRNE Enhanced Response Force Package (CERFP) medical assemblage to better meet the CBRNE enterprise Homeland Response Force (HRF) mission. The 10 new HRF/CERFP units coming on board in FY 2011/FY 2012 will have the new modernized medical assemblages. The current 17 CERFP units will require the upgraded equipment assemblages to be current with the new standard. $3.2M in NGREA FY 2009 funds are being used to upgrade the Block 11 EMEDS to the Block 12 configuration. The ANG has a $4M shortfall for upgrading all of the EMEDS medical platforms.

There is also an additional shortfall of $3M to purchase initial oxygen and water distribution systems, which are critical for sustained medical operations during HD missions. In addition to the EMEDS capability, the medical component to CERFP has been modernized to better fit the mission. With this modernization, there remains a $6M deficit.

The ANG anticipates shortfalls of between $10–20M. This would be based on anticipating a new Block 14 allowance standard for the EMEDS +10/+25. Additionally, the Small Portable Expeditionary Aerospace Rapid Response (SPEARR) package used for the ANG CERFP mission has been modernized significantly to better fit the mission. There has been an addition of

10 new HRF/CERFP teams by FY 2012 for a total of 27 teams across the U. S. states and territories.

xxx) Engineering

The overall engineering status is excellent at 86 percent. However, prime power, route clearance, search and rescue, and firefighting equipment shortages are inhibiting the ANG's ability to concurrently perform home station or OCO and NGSCA missions. For example, prime power requires in excess of $12M in power generation capability that will be used to provide stable, reliable electrical power in deployed environments either abroad or during NGSCA operations. During NGSCA operations, this power would be a life saving capability for the affected community. The equipment will be capable of increasing and maintaining emergency power for an extended period to a hospital center, shelter, or other facilities deemed critical to the community. These teams and equipment could power entire facilities or areas of the community. Additionally, the prime power makes possible the open the base capability, either expeditionary or contingency, for the ANG. Currently insufficient capacity exists in the 10 FEMA regions. The ANG is taking all steps possible to acquire prime power capability to ensure safe, reliable, and effective power is available for Federal and NGSCA missions, when required.

b. Overall Equipment Readiness

Details can be gathered from the "Modernization Programs and Shortfalls" section and Appendix B of this report.

B. Changes Since Last NGRER

Although the underlying equipping philosophy of the ANG has not changed, significant mission and programmatic changes are underway since the last report. To support a Total Force approach in modernizing the CAF, the ANG, in concert with the AC, has an ongoing effort to build associations to maximize effectiveness for the ANG and AC. As a result, fewer facilities, airframes, support personnel, etc. are required to ensure the relevancy, reliability, and responsiveness of the blended units. We anticipate more associate unit relationships with other Air Force components.

The ANG continues to expand its role in space and information operations warfare as evidenced by the ANG work with the Air Force to integrate and stand up Predator units within the FYDP, with the potential for more outside the FYDP.

In August 2010, the ANG hosted its second annual Domestic Operations Equipment Requirements Conference. Similar to last year's conference, the objective of the conference was to define, validate, document, and prioritize materiel capabilities needed by ANG units to support civil authorities at all levels of government. The DOERs Book for FY 2012 will be available mid-November 2010.

C. Future Years Program (FY 2012–FY 2014)

1. FY 2012 Equipment Requirements

The ANG fleet expects continued modernization in FY 2011 and beyond, enabling the ANG to fly aircraft well beyond their designed life. Refer to details in each previous individual section

for modernization. Further details can be gathered from the "Modernization Programs and Shortfalls" section and Appendix B of this report.

2. Anticipated New Equipment Procurements

Funding for procurement of major items of ANG combat and direct combat support equipment is programmed by the AC to meet planned total force employment plans. The Congress, in its annual budget appropriation, may also direct additional ANG equipment procurements through NGREA.

3. Anticipated Transfers from AC to RC

Refer to *Table 5* and *Table 6* for detailed information on transfers from the AC to RC.

4. Anticipated Withdrawals from RC Inventory

Refer to *Table 5* and *Table 6* for detailed information on withdrawals from the RC.

5. Equipment Shortages and Modernization Shortfalls at the End of FY 2014

For equipment and modernization shortfalls at the end of FY 2014, see the discussion of individual weapons systems modernization in the "Modernization Programs and Shortfalls" section, as well as the status of equipment in Appendix B.

D. Summary

While support equipment levels remain comparable to Air Force levels, NGREA funding is vital to ANG modernization efforts. With the need to fully fund ongoing operations and continued pressure on defense budgets, obtaining adequate funding for procuring equipment and modernization efforts is a challenge. Without adequate Service funding, NGREA or other sources, the ANG will be unable to modernize legacy platforms and equipment and will no longer remain an equal and effective partner in the Total Force.

The ANG will continue to adapt to meet the needs of the combatant commanders for combat and combat support forces and of our states for support of domestic operations. The ANG is fully engaged at all levels in operations in Afghanistan and Iraq as well as in operations to directly defend our homeland; such as the new Homeland Response Force mission. We are ready to respond to any tasking with fully mission-ready professionals equipped with capable, if aging, weapon systems.

ANG

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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Air Refueling							
Air Refueling, KC-135R	KC-135R	$57,700,000	159	159	165	167	167
Air Refueling, KC-135T	KC-135T	$54,000,000	24	24	24	24	24
Airlift							
Airlift, C-130H	C-130H	$29,200,000	112	112	112	112	112
Airlift, C-130J	C-130J	$64,000,000	20	20	20	20	20
Airlift, C-17A	C-17A	$219,200,000	17	17	17	17	17
Airlift, C-5A	C-5A	$119,300,000	21	21	21	21	21
Airlift, C-27J	C-27J	$31,000,000	11	15	23	31	38
Airlift, LC-130H [1]	LC-130H	$71,000,000	10	10	10	10	10
Airlift, WC-130H	WC-130H	$60,000,000	6	6	6	6	6
Electronic Warfare (EW)							
EW, E-8C	E-8C/AOT	$251,500,000	17	17	17	17	17
EW, EC-130J	EC-130J	$90,000,000	3	3	3	3	3
EW, RC-26B	RC-26B	$1,500,000	11	11	11	11	11
Fighter							
Fighter, A-10C	A-10C	$10,700,000	106	100	100	100	100
Fighter, F-15C	F-15C	$31,000,000	108	108	108	108	108
Fighter, F-15D	F-15D	$31,000,000	21	21	21	21	21
Fighter, F-16C	F-16C	$19,500,000	295	295	295	295	295
Fighter, F-16D	F-16D	$19,500,000	46	46	46	46	46
Fighter, F-22A	F-22A	$185,000,000	20	20	20	20	20
Operational Support							
Op Support, C-21A	C-21A	$3,100,000	26	2	2	2	2
Op Support, C-32B	C-32B	$91,000,000	2	2	2	2	2
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
Rescue							
Rescue, HC-130N/P	HC-130N/P	$19,100,000	9	9	9	9	9
Rescue, HH-60G	HH-60G	$17,600,000	17	17	16	16	16
Rescue, MC-130P	MC-130P	$75,000,000	4	4	4	4	4
Miscellaneous Equipment							
MD-1A/B	MD-1A/B	$2,500,000	21	21	21	21	21
MQ-1B	MQ-1B	$4,500,000	42	42	42	42	42
MQ-9A	MQ-9A	$16,500,000	14	16	16	16	16

ANG   Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	FY 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Firefight/Crash Vehicle	P-19	$833,573	161	161	161	161	170
High Mobility Multipurpose Wheeled Vehicle (HMMWV), Armored	M1145	$192,400	4	4	4	4	204
Expeditionary Medical Support (EMEDS)	EMEDS	$3,500,000	9	9	9	9	9
25K Loaders	25K LDR	$560,986	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 2011.

Nomenclature	Equip No.	Average Age	Remarks
Air Refueling			
Air Refueling, KC-135R	KC-135R	49	
Air Refueling, KC-135T	KC-135T	51	
Airlift			
Airlift, C-130H	C-130H	21	
Airlift, C-130J	C-130J	7	
Airlift, C-17A	C-17A	7	
Airlift, C-5A	C-5A	39	
Airlift, LC-130H	LC-130H	25	
Airlift, WC-130H	WC-130H	45	
Airlift, C-27J	C-27J	1	
Electronic Warfare (EW)			
EW, E-8C	E-8C	10	
EW, EC-130J	EC-130J	10	
EW, RC-26B	RC-26B	16	
Fighter			
Fighter, A-10C	A/OA-10C	30	
Fighter, F-15C	F-15C	27	
Fighter, F-15D	F-15D	28	
Fighter, F-16C	F-16C	21	
Fighter, F-16D	F-16D	22	
Fighter, F-22A	F-22A	5	
Operational Support			
Op Support, C-21A	C-21A	25	
Op Support, C-32B	C-32B	7	
Op Support, C-38A	C-38A	12	
Op Support, C-40C	C-40C	7	
Rescue			
Rescue, HC-130N	HC-130N	17	
Rescue, HC-130P	HC-130P	44	
Rescue, HH-60G	HH-60G	20	
Rescue, MC-130P	MC-130P	44	
Intelligence, Surveillance & Reconnaissance (ISR)			
ISR, MQ-001B	MQ-001B	2	
ISR, MQ-009A	MQ-009A	2	

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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.			
Nomenclature	**FY 2012**	**FY 2013**	**FY 2014**
P-1R data from FY 2012 President's Budget Submission was not available in time for publication in the NGRER.			
The FY 2012 P-1R will be available on the Office of the Under Secretary of Defense (Comptroller) public web site (http://comptroller.defense.gov/index.html) upon release of the FY 2012 President's Budget Submission.			

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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
FY 2009 Title III NGREA Equipment			
Medical			
Expeditionary Medical Support (EMEDS+25)	$1,700,000		
Expeditionary Medical Support Pediatric Packages	1,116,000		
Advanced Electronic Support Equipment	670,000		
Communications			
Wireless LAN Enhancements	1,080,000		
Joint Incident Site Communications	1,125,000		
ASA Command Post Consoles	1,150,000		
Logistics			
Reconnaissance, Surveillance, and Targeting for Expeditionary Medical Suport	415,000		
Reconnaissance, Surveillance, and Targeting for Fatality Search & Recovery Team	36,000		
SPEK Kitchen Component Parts, Phase IV	1,700,000		
Vehicles	231,000		
Transportation			
P-22 Pumpers Firefighting Vehicles	1,284,000		
P-26 Water Tenders Firefighting Vehicles	1,276,000		
P-19 & P-23 Firefighting Vehicles	751,000		
Engineer			
Night Vision Goggles for Firefighters	1,004,000		
Reverse Osmosis Water Purification Unit	940,000		
Communications Sets (4F9ER)	548,000		
Explosive Ordnance Disposal IED Equipment	773,000		
Civil Support Teams (Force Protection)			
Powered Air Purifying Respirators (PAPR)	660,000		
Hazardous Material Equipment for Firefighters	592,000		
Mobile Emergency Operations Center Trailers w/C2 (IOC)	1,168,000		
Fatality Search & Recovery Team Equipment	660,000		
Maintenance			
TC MAX Tool Control System	1,700,000		
Sensitor Extirma Fuel Leak Detector	468,000		
Hydromite Strut Servicing Equipment	708,000		
C-130/F-16 Infrared Receiver Tester	225,000		
Munitions Storage Area Documentation	50,000		
Security			
Security Forces Equipment & Training Upgrades	1,248,000		
Body Armor	1,440,000		
Night Vision Goggles	1,000,000		
Weapons Upgrades	2,850,000		
Aviation			
F-16 Advanced Interrogator, Friend/Foe (AIFF)	320,000		

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
HH-60/PJ/ST Data Link	1,000,000		
C-130/KC-135/F-15/HH-60 Data Link	4,000,000		
HC/MC-130 Enhanced Air Mobility Command	1,250,000		
Precision Strike			
F-15/F-16/A-10/HH-60 HMCS	9,000,000		
F-15/F-16 Avionics Enhancements	3,500,000		
F-16/A-10 Advanced Targeting Pod	1,000,000		
F-16/A-10 Advanced Targeting Pod Modifications	10,000,000		
Data Link/Combat Identification			
F-16/A-10/HC-130 Beyond Line of Sight Radios	3,000,000		
C-130/KC-135 Beyond Line of Sight Radios	2,100,000		
RC-26 Avionics Modification	500,000		
A-10/HH-60/HC-130 Low Altitude Radar System	1,000,000		
24-hour Operations			
JSTARS 8.33 Radios	2,200,000		
F-15/F-16 Digital Video Recorder	500,000		
C-130 Joint Precision Airdrop System	600,000		
C-21 Avionics Upgrades	1,000,000		
C-40 Avionics Enhancements	900,000		
Enhanced Survivability			
C-130/C-17/C-5A Defensive Systems	5,600,000		
PJ/ST Special Tactics Suite	1,500,000		
C-17/C-130/C-5 Enhanced Lookout Capability	500,000		
HH-60 Defensive Armament Upgrade	2,252,000		
KC-135/C-5/C-130 Counter Measures	1,000,000		
C-130 Chaff/Flare Dispensers	1,500,000		
A-10/F-16 Defensive Systems Upgrades	3,500,000		
Propulsion Modernization			
C-130 Propulsion System Upgrade	3,500,000		
F-16/A-10 Propulsion System Upgrade	5,100,000		
Simulation Systems			
KC-135 Boom Operator Simulator	1,500,000		
HH-60 Pave Hawk Aircrew Rehearsal & Operations Simulator (PHAROS)	2,000,000		
Unmanned Aircraft System (UAS) Desktop Simulator	300,000		
Intelligence, Surveillance, Reconnaissance (ISR)			
Senior Scout PL-2 Security Accreditation	150,000		
Distributed Common Ground	5,850,000		
P.L. 110-329, Section 8101 Reduction	(310,000)		
FY 2009 TITLE IX OVERSEAS EQUIPMENT			
F-16/A-10/HH-60 Helmet Mounted Cueing System	10,000,000		
F-16/A-10 Targeting Pod Modifications	10,000,000		
HC/MC-130 Enhanced Situational Awareness Suite	9,000,000		
Senior Scout Enhancements	6,000,000		
HH-60 Defensive Armament/Cabin and SA Upgrade	5,000,000		
Large Aircraft Defensive Systems	4,000,000		
A-10 Secure Line-of-site/Beyond Line-of-site Radios	3,000,000		
A-10 Defensive Systems Upgrade	3,000,000		
FY 2010 Title III NGREA Equipment			

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
Mobile Aeromedical Staging Facility (MASF)		$1,245,000	
Aeromedical Evacuation Patient Movement Items		88,000	
Weather Data Communication Equipment		200,000	
Interoperable Medical Communications Suite		270,000	
Mobile Full Motion Video Geospatial Intelligence Info Exploitation Packages		200,000	
Air Defense Sector (ADS) Tactical Satellite Communications		1,800,000	
Mobile Full Motion Video Geospatial Intelligence Info Exploitation Packages Rover Vehicles		400,000	
Mass Field Feeding - Ultimate Mobile Airtronic Kitchen		3,750,000	
Disaster Relief Bed-down Sets		6,600,000	
Mobile Control Tower Vehicles		2,240,000	
Mobile Command Post Trailers		3,215,000	
Fatality Search and Recover Team (FSRT) Trailers		300,000	
Fatality Search and Recover Team (FSRT) Gators 4X4		561,000	
Tactical Medical Vehicles		500,000	
Ambulance Bus		400,000	
Less than Lethal Crowd Control / Civil Disturbance Kits		2,480,000	
Weapons of Mass Destruction/Installation Protection Units		2,006,000	
Distributed Ground Station (DGS) Ground Receiver Equipment for RC-26 Incident Awareness and Assessment (IAA) Operations		2,750,000	
Aeromedical Evacuation Inflight Kits		995,000	
A-10/F-15/F-16/HH-60 Helmet-mounted Cueing System		17,400,000	
F-15/F-16 Color Displays		8,030,000	
A-10/F-15/F-16 Communication Suite Upgrade		9,180,000	
A-10/F-15/F-16 Digital Radar Warning Receiver (RWR)		3,120,000	
A-10/F-15/F-16 Digital Radio Frequency Memory (DRFM) Jammers		500,000	
A-10/1F-16 Advanced Targeting Pods		2,000,000	
JSTARS Low Cross Section Radar Detection Upgrades		500,000	
F-16 Advanced Interrogation Friend or Foe (AIFF)		800,000	
F-15/F-16 Infrared Search and Track		1,000,000	
A-10/F-15/F-16 Defensive Systems Upgades		4,600,000	
Ballistic Missile Range Safety Technology		700,000	
Cyber and Critical Infrastructure Range		1,700,000	
Remotely Piloted Aircraft (RPA) Integrated Data Link		2,800,000	
RC-26 Avionics Modernization		3,045,000	
RC-26 Adaptable Communications Suite		1,900,000	
Senior Scout Radio Frequency Cancellation		3,900,000	
Remotely Piloted Aircraft (RPA) Improved Communication Suite		390,000	
HH-60G Communications and Avionics Upgrade		1,500,000	
HC-130/MC-130 Sensor and Data Link Upgrades		2,000,000	
Pararescue / Special Tactics Training Suite		1,800,000	
Special Tactics Survivability Suite		1,500,000	
Pararescue Vehicles and Combat Survivability Suite		1,800,000	
Security Forces Personnel Protective Equipment and Weapons		1,000,000	
C-130/KC-135 Real Time Information in the Cockpit (RTIC)		9,600,000	
C-130 Loadmaster Seats		8,300,000	
C-130/KC-135 Lighting		800,000	
LC-130 Propulsion Upgrade		2,700,000	
LC-130 Crevasse Detection Radar		1,800,000	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
C-40 High Speed Data		500,000	
C-40 Electronic Flight Bag		600,000	
C-21 Avionics Upgrade		4,000,000	
C-5/C-17/C-130 Lookout Capability		3,000,000	
C-5/C-17/C-130/KC-135 Defensive Systems		1,000,000	
KC-135 Boom Operator Simulator System		1,350,000	
MQ-9 Reaper Mission Training Devices		185,000	
Total	**$154,380,000**	**$135,000,000**	

1. FY 2011 NGREA data from FY 2011 Defense Appropriations Bill was not available in time for publication in the NGRER. Data for FY 2011 will be provided in next year's NGRER.

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Table 5

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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Air Refueling					
Air Refueling, KC-135R	KC-135R		+6	+2	
Fighter					
Fighter, A-10C	A-10C	-6			
Operational Support					
Op Support, C-21A	C-21A	-24			
Rescue					
Rescue, HH-60G	HH-60G		-1		
Miscellaneous Equipment					
MQ-9A	MQ-9A	+2			

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Table 6

FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 Planned Transfers & Withdrawals							
Air Refueling							
Air Refueling, KC-135E	KC-135E	-36	+0				
Air Refueling, KC-135R/T	KC-135R/T	+16	+0				
Air Support							
Air Support, OA-10A	OA-10A	+1	+0				
Airlift							
Airlift, C-130E	C-130E	-11	+0				
Airlift, C-130H	C-130H	-2	-5				
Airlift, C-5A	C-5A	+3	+0				
Airlift, C-5B	C-5B	+1	+0				
Electronic Warfare							
EW, EC-130J	C-130E	+2	+2				
Fighter							
Fighter, A-10A	A-10A	+2	-6				
Fighter, F-15A	F-15A	-5	-5				
Fighter, F-15B	F-15B	-7	-7				
Fighter, F-15C	F-15C	+9	+9				
Fighter, F-15D	F-15D	+8	+6				
Fighter, F-16A	F-16A	-39	-39				
Fighter, F-16B	F-16B	-12	-12				
Fighter, F-16C	F-16C	+2	+33				
Fighter, F-16D	F-16D	-1	+1				
Miscellaneous Equipment							
MQ-1B	MQ-1B	+6	+0				
FY 2008 P-1R Equipment							
Modification of Inservice Aircraft							
A-10				$24,231,000	$31,565,000		
F-15				8,241,000	87,000		
F-16				94,530,000	126,453,000		
C-5				45,028,000	36,996,000		
C-17A				10,561,000	0		
C-32A				1,646,000	0		
C-130				135,688,000	24,456,000		

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Table 6

ANG
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
C130J Modifications				31,752,000	3,343,000		
C-135				49,677,000	31,955,000		
E-8				79,689,000	0		
H-60				3,639,000	6,869,000		
Aircraft Support Equipment and Facilities							
Aircraft Replacement Support Equipment				19,228,000	6,027,000		
Other Production Charges				13,664,000	0		
Vehicular Equipment							
Passenger Carrying Vehicles				0	3,179,000		
Medium Tactical Vehicle				0	1,533,000		
Fire Fighting/Crash Rescue Vehicles				0	4,653,000		
Runway Snow Removal and Cleaning Equipment				8,967,000	8,073,000		
Items Less Than $5M (Vehicles)				5,256,000	6,108,000		
Electronics and Telecommunications Equipment							
Intelligence Comm Equipment				0	9,906,000		
National Airspace System				3,984,000	770,000		
Theater Air Control Sys Improvement				19,952,000	7,898,000		
Weather Observation Forecast				2,625,000	0		
AF Global Command & Control System				673,000	2,656,000		
Theater Battle Mgt C2 System				0	1,800,000		
Combat Training Ranges				1,304,000	4,000,000		
Theater Battle Mgt C2 System				2,769,000	1,417,000		
Air & Space Operations Center - Weapon System				0	5,900,000		
Base Info Infrastructure				5,174,000	0		
NAVSTAR GPS Space				380,000	0		
Tactical Communications - Electronics Equipment				18,170,000	39,665,000		
Base Communications Infrastructure				31,099,000	42,714,000		
Other Base Maintenance and Support Equipment							
Night Vision Goggles				1,275,000	1,589,000		
Base Procured Equipment				0	3,094,000		
Mechanized Material Handling Equipment				5,944,000	8,301,000		
Items Less Than $2M (Base Support)				8,727,000	8,300,000		
FY 2008 Title III NGREA Equipment							
Medical							
Expeditionary Medical Support (EMEDS)						$7,600,000	$7,600,000
Expeditionary Deployment O2 Conc Sys (EDOCS)						1,800,000	1,800,000
Materials Handling And Storage Equipment						600,000	600,000
Communications							
Deployable Wireless Capability						4,000,000	4,000,000

Table 6

ANG

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
C2/TACP SADL Kits						444,000	444,000
Logistics							
Combat Readiness Training Center Equipment						2,000,000	2,000,000
HLS/HLD Mission Essential Equipment						1,000,000	1,000,000
Transportation							
HMMWV XM1145						9,156,000	9,156,000
Engineer							
P-19, P-22, P-23 Firefighting Vehicles						5,800,000	5,800,000
Hazardous Material Equipment						1,500,000	1,500,000
Fire Fighters Self Contained Breathing Apparatus						2,000,000	2,000,000
Explosive Ordnance Disposal (EOD) IED Equipment						2,000,000	2,000,000
Civil Support Teams (Force Protection)							
PJ/STS Medical Treatment Equipment						2,500,000	2,500,000
Maintenance							
Radio Frequency Identification						400,000	400,000
Security							
Security Forces Night Vision AN/PVS-14						5,000,000	5,000,000
Security Forces Body Armor Ensemble						2,400,000	2,400,000
Security Forces Weapons & Training Upgrades						2,600,000	2,600,000
Aviation							
F-15 Very High Speed Integrated Circuitry Central Computer						3,000,000	3,000,000
F-16 Advanced Interrogator Friend/Foe						4,800,000	4,800,000
HC-130 Tactical Data Link						1,200,000	1,200,000
PJ Situational Awareness Suite						1,600,000	1,600,000
HC/MC-130 Enhanced Airborne Mission Commander						1,200,000	1,200,000
C-130 Cockpit Display Units						3,300,000	3,300,000
C-21 Reduced Vertical Separation Minimum						3,200,000	3,200,000
C-130 APN-241 Radar						1,000,000	1,000,000
C-130 Propulsion Improvements						1,500,000	1,500,000
C-130 Radars						1,000,000	1,000,000
Modular Airborne Fire Fighting Systems VHF/FM Radio						2,000,000	2,000,000
Precision Strike							
F-15/F-16/A-10 Helmet Mounted Cueing System						7,000,000	7,000,000
F-16 Avionics Upgrades & Advanced Mission Extenders						6,200,000	6,200,000
F-16/A-10 Advanced Targeting Pod/Thunder Pod						10,500,000	10,500,000
F-16/A-10 Targeting Pod Video Downlink						2,000,000	2,000,000
F-16/A-10 Targeting Pod Modifications						3,000,000	3,000,000
Data Link/Combat Identification							
F-16/A-10 Beyond Line-of-site Radios						3,900,000	3,900,000

FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
C-130/KC-135 Tactical Data Link						5,500,000	5,500,000
KC-135 Cockpit Display Unit						1,500,000	1,500,000
24 Hour Operations							
JSTARS 8.33 Radios						2,200,000	2,200,000
F-15/F-16 Digital Video Recorder						1,000,000	1,000,000
C2/TACP Up-armored HMMWV						414,000	414,000
Enhanced Survivability							
C-5A Defensive Systems						3,900,000	3,900,000
PJ/ST Special Tactics Suite						1,700,000	1,700,000
C-130/C-5/C-17 Enhanced Lookout Capability						2,600,000	2,600,000
HH-60,HC/MC-130,A-10 Lightweight Airborne Radio System (LARS)						2,750,000	2,750,000
HH-60 Defensive Armament Upgrade						1,000,000	1,000,000
KC-135/C-5/C-130 Countermeasures						500,000	500,000
C-130 Crashworthy Loadmaster Seats						3,000,000	3,000,000
Propulsion Modernization							
F-16 Propulsion System Upgrades						5,100,000	5,100,000
Simulation Systems							
F-16 Full Combat Mission Trainer						250,000	250,000
A-10 Full Mission Trainer						400,000	400,000
KC-135 Boom Operator Simulator						800,000	800,000
Intelligence, Surveillance, Reconnaissance (ISR)							
Predator Operations Equipment Modernization & Integration						3,000,000	3,000,000
DCGS Collateral Enclave & Comm Support Modernization						3,072,000	3,072,000
Senior Scout Situational Awareness						3,100,000	3,100,000
Total				$633,873,000	$429,307,000	$148,986,000	$148,986,000

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 2012 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	A-10/F-16 Helmet Mounted Integrated Targeting System	322	322	$120,000	$38,640,000	Reduces time required for pilots to acquire targets from minutes to seconds, enabling pilots to enage high value fleeting targets. Significantly increases pilot survivability and lethality by displaying information directly in front of pilot's eye at all times.
2	Large Aircraft Infrared Countermeasures (LAIRCM) (C130, C-17, C-5)	156	77	$5,600,000	$431,200,000	Allows combat delivery/CSAR aircraft to survive attacks from shoulder launched missiles, a rapidly proliferating threat
3	Security Force Mobility Bag Upgrades, Personal Protective Equipment, and Weapons	68,272	68,272	$1,262	$86,150,000	High deployment and ops tempos have caused significant wear and tear on mobility bags and equipment must be replaced. Modular body armor is required to give SF personnel protection and greater mobility. M4/M203/M240B/M249 weapons and weapons accessories are required for ground personnel performing outside-the-wire patrols and convoy support. Explosive detection equipment is required to provide both domestic and operational security for facilities and personnel. Less Than Lethal equipment is necessary to provide security while responding to domestic disasters and phase 4 and phase 5 (riot control, prison administration, etc.) of operational missions.
4	C-130 Loadmaster Lookout Windows and Crashworthy Loadmaster Seats	Various	Various	Various	$164,000,000	The C-130 loadmaster scans behind the aircraft during flight in hostile areas looking for enemy fire directed toward the aircraft. New aft side doors with larger windows will increase scan volume to encompass the 3 o'clock to 9 o'clock positions, improving lookout ability and reducing neck strain. New crashworthy seats improve loadmaster safety during hard landings and enable scanning while seated during long missions.
5	F-15 Active Electronically Scanned Array (AESA) Radar	48	30	$8,720,000	$261,600,000	Replaces mechanically scanned radar with an electronically scanned array which provides detection and tracking in multiple directions simultaneously, and enables tracking of small asymmetric targets.

Table 8

ANG
Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
6	Advanced Targeting Pods Upgrades	69	20	$1,200,000	$24,000,000	Improves targeting pod sensors to more than double target acqusition and ID range, increasing standoff and improving weapon delivery accuracy.
7	HH-60 Color Displays / Situational Awareness Data Link (SADL)	40	40	$135,000	$5,400,000	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 SADL, Lightweight Airborne Radio System (LARS) V12, and Intelligence Broadcast Receiver (IBR) threat data.
8	RC-26 Avionics Upgrade	11	11	$2,389,000	$26,279,000	Updates the RC-26 avionics suite to address communications/navigation shortfalls occuring as a result of expanded aircraft employment.
9	C-5 Crown Skin and Contour Box Beam Fitting Replacement	33	33	$8,600,000	$283,800,000	Modification to upgrade components affected by Stress Corrosion Cracking (SCC) that are reducing C-5 payload capacity by 20%.
10	C-130 Real Time in Cockpit (RTIC)	120	120	$330,000	$39,600,000	SADL, ARC-210 Radio (SLOS/BLOS capability), Tactical Display Unit. Integrated Unit providing C-130 community needed combat capability.

III. Air Force Reserve Overview

A. Current Status of the Air Force Reserve

1. General Overview

The mission of the United States Air Force is to deliver sovereign options for the defense of the United States of America and its global interests -- to "fly, fight, and win… in Air, Space, and Cyberspace." The AFR is a joint partner in that mission; it shares in the top priorities of the AF, among which is modernizing our air and space inventories, organizations, and training. The AF fully integrates the air, space, and cyberspace power of the AC and RC forces into a Total Force to achieve success. In recent years, the AFR has seen a shift from a strategic reserve to an operational reserve with the continued responsibility of maintaining a strategic capability. It is increasingly relied upon to support the requirements of the AF and combatant commanders. Because of this shift, the equipment requirements of the AFR have increased dramatically. In addition to its operational and strategic roles, the Air Force Reserve Command (AFRC) is responsible for organizing, training, and equipping all AFR forces.

> **Top AFR Equipping Challenges**
>
> - **Defensive Systems:** LAIRCM, ADS, and MWS: equip aircraft lacking adequate infrared missile protection for combat operations
>
> - **Data Link and Secure Communications:** Data link network supporting image/video, threat updates, and SLOS/BLOS communications for combat missions
>
> - **C-5 Maintenance:** Failing major fuselage structures and funding for depot maintenance

The primary equipment requirements for the AFR are defined by whether a squadron is unit equipped (UE) and possesses assigned aircraft, or is an associate unit that shares aircraft and equipment.

The AFR has 33 flying wings and one space wing with 32 UE squadrons and 53 associate units. There are also 8 associate units in the AFR operating space mission partnerships including: satellite C2; missile warning; Joint Space Operations Center; 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.

To meet these missions, AFR has 346 primary aircraft assigned to UE squadrons including the F-16C/D, A-10, B-52H, C-5A/B, C-9C, C-40C, C-17A, MC-130E, C-130H, C-130J, WC-130J, HC-130N/P, KC-135R, and HH-60G. These units, aircraft, crews, and support personnel stand ready for assignment to our partner commands. Additionally, many of our Agile Combat Support units, Security Forces, Aerial Port Squadrons, Space Trainers, etc., have sophisticated equipment requirements that require modernization and replacement.

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 multi-role fighter with capabilities for offensive and defensive counter-air, air interdiction, suppression of enemy air defenses, close air support, nontraditional ISR, and Forward Air Control (FAC)–Airborne missions. AFR has 48 Block 30 F-16C/D aircraft assigned between Joint Reserve Base (JRB), Ft. Worth, TX, and Homestead Air Reserve Base (ARB), FL. AFR F-16s are equipped with Enhanced Position Location Reporting System (EPLRS)/SADL, Theater Air Reconnaissance System pods, and LITENING ATP with video data link capabilities. Recent AFR F-16 modifications improved the capability to employ the latest generation of precision guided air-to-ground and air-to-air weapons and installed ARC-210 SLOS radios.

b) A-10 "Thunderbolt II"

AFR A-10s have entered the Precision Engagement (PE) depot modification line. The last A-10 will exit the depot line by December 29, 2010. AFR A-10s have started cycling through the consolidated install line at Boise, ID, for AAR-47, Turbine Engine Monitoring System-Airborne Data Recording, Suite 6, and second ARC-210 modifications. The A-10 is specifically designed for close air support and FAC missions. The AFR has 42 A-10 aircraft assigned between Whiteman AFB, MO, and Barksdale AFB, LA. AFR A-10s were upgraded to A-10Cs. PE added the Joint Direct Attack Munition (JDAM) capability. The AAR-47 MWS will also be installed in AFR A-10s during the PE upgrade installation to provide an integrated and automatic missile warning and threat response to defeat IR missile threats. A second ARC-210 BLOS radio capability to meet combatant commander requirements, providing the first ever capability in AF fighter aircraft, is scheduled for install June 2011.

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, close air support, and nuclear missions. Sixteen B-52H aircraft assigned to the AFR 917th Wing at Barksdale AFB, LA, train aircrews to employ laser guided bombs, conventional air launched cruise missiles, the precision GPS-guided JDAM, the Wind Corrected Munitions Dispenser (WCMD), the Joint Air-to-Surface Stand-off Missile, and unguided gravity conventional munitions. The 917th Wing also has associate aircrews that support these B-52 capabilities in a combat role.

The AFR B-52 fleet, with an average fleet age of 49 years, has recently transitioned to a formal training unit (FTU) mission. The challenge of providing highly trained crewmembers to the force has brought new equipment shortfalls to the forefront of AFR B-52 unfunded requirements. The most important shortfall of these requirements is a Digital Mission Data System (DMDS). FY 2010 funds in the amount of $3.2 M have been allocated to equip 18 AFR B-52s. The DMDS

is seen as critical to timely and accurate debrief of students in the FTU. Present mission records and debrief are conducted manually with paper notepads and pencils. Two other important upgrades supporting the FTU mission are Alternate Mission Equipment (AME) and CONECT. AME is funded with FY 2010 funds and starts deliveries FY 2011. AME coupled with aircraft OFP BSB-04/05 will allow full control of our LITENING targeting pods. Approximately $2.0M FY 2011 or 2012 funds are still required to support aircraft OFP work. If these funds are not made available, then B-52 aircraft will not be able to carry the advanced versions of targeting pods.AFR B-52Hs are equipped with LITENING ATP capability to allow crews to self-designate targets, 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.

iii. Airlift Aircraft

a) C-5 "Galaxy"

The C-5, with its tremendous payload capability, provides inter-theater airlift in support of U.S. national security. The conversion of the 445th Airlift Wing at Wright-Patterson AFB, OH in FY 2011/2012 to C-17s and impending C-5A retirements reduces AFR's assigned C-5s to 28. Lackland AFB, TX is the home of the C-5A FTU and conducts all C-5A initial and upgrade training. The C-5 AMP addresses avionics obsolescence issues; that production program is nearing completion as all B-models and C-models have been modified, and 17 of 37 required A-models have been modified.

RERP, scheduled for C-5B models only, replaces engines with commercially proven, more powerful engines, addresses high failure system components, and changes the aircraft designation to the C-5M. RERP production started the end of FY 2009 with completion in late FY 2016. The C-5A ADS program, largely funded with NGREA, provides an initial capability to defeat IR SAMs and began installs in FY 2009 with completion of funded aircraft expected in FY 2013.

b) C-130 "Hercules," Intra-theater Airlift

AFR's C130H/J aircraft provide intra-theater airlift support from Keesler AFB, MS; Pope AFB, NC; Dobbins ARB, GA; Peterson AFB, CO; Maxwell AFB, AL; Youngstown Air Reserve Station (ARS), OH; Pittsburgh International Airport (IAP), PA; Niagara Falls IAP, NY; and Minneapolis-St. Paul ARS, MN. AFR C-130s also provide 25 percent of our nation's military aerial firefighting capability, 100 percent of aerial spray requirements, and a weather squadron.

A major long-term modernization program, the AMP, plans to convert the entire C-130H fleet to a standard avionics configuration to include a "glass" cockpit and updated equipment to meet international CNS/ATM requirements. This upgrade will also install Night Vision Imaging System (NVIS) compatible lighting throughout the aircraft. This modification will allow C-130 aircraft to execute their missions both domestically and internationally for the next 20–30 years. However, budget concerns may prevent these modifications from going forward, forcing AFR to procure equipment on its own to ensure future worldwide airlift operations.

c) C-17A "Globemaster III," Inter and Intra-theater Airlift

The C-17 is the nation's core military airlifter. Under the present program of record, AFR maintains a fleet of 16 C-17s located at March ARB, CA, and Wright Patterson AFB, OH. The C-17 provides a wide-body, heavy-lift aircraft capability that spans intercontinental ranges and can operate into austere tactical airfields. Long-term modernization initiatives include required navigation performance improvement, high-frequency data link, airdrop improvements, and BLOS secure voice.

d) C-9C Global VIP Airlift

AFR operates three C-9C legacy aircraft assigned to the Operational Support Airlift (OSA) mission and serves to support the very-important-person (VIP) airlift mission at Scott AFB, IL. The C-9Cs recently received CNS/ATM upgrade modifications that will extend their viability operating in the national and international airspace environments. Sustainment costs for the C-9Cs should remain stable for the near future.

e) C-40C Global VIP Airlift

AFR operates four assigned C-40C aircraft at Scott AFB, IL. The C-40C provides safe, secure, and reliable transportation for U.S. leaders to locations around the world. The C-40C's primary customers include members of the Cabinet and Congress. The aircraft also performs other operational support missions. The three assigned C-40Cs have received the LAIRCM upgrade. A fourth C-40C, scheduled to deliver to Scott AFB, IL in December 2011, is currently not funded to receive the LAIRCM upgrade. The unfunded LAIRCM is number one, $10M, on AMC's OSA/VIP Special Airlift requirements list. LAIRCM is essential for safety-of-flight in elevated risk environments.

iv. Special Mission Aircraft

a) WC-130J "Hurricane Hunter"

AFR conducts 100 percent of the Air Force weather reconnaissance mission using ten WC-130J (Hurricane Hunter) aircraft assigned to the 403rd Wing located at Keesler AFB, MS. These aircraft are specially equipped to penetrate hurricanes and typhoons to collect and transmit real-time storm data for the National Hurricane Center. This national asset operates with a base crew of pilot, copilot, navigator, meteorologist, and weather reconnaissance loadmaster (dropsonde operator). The Hurricane Hunters have proven critical in forecasting the movement of dangerous storms—increasing the accuracy of storm forecasting by as much as 30 percent.

b) MC-130E "Combat Talon I"

Under present program of record, AFR has 6 MC-130E Combat Talon I aircraft located at Duke Field, FL, providing 16 percent of Air Force special operations infiltration/exfiltration and 25 percent of special operations tanker capability. These unique aircraft are equipped with terrain-following radar and unique defensive and navigational equipment that allows the crews to 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.

An upgrade of Talon I radar altimeter capability, funded by FY 2008 Supplemental funding, is in progress to ensure greater flight safety, with installations beginning in early FY 2012. Air Force Special Operations Command (AFSOC) (the lead command) has indicated it will reduce the Talon I fleet over the next three years, eventually retiring the fleet. AFSOC has requested the AFR submit a Program Change Request to maintain four Talon I aircraft from 2013–2015; to maintain capability until new MC-130J aircraft are able to be brought into the force. These aircraft operate in highly demanding tactical environments, which may drive limited future modifications. Any Talon I modifications through 2014 will be mission driven and will be temporary modifications due to aircraft sundown rules. Remissioning of AFR special operations personnel began in 2009 and will accelerate as more Talon I aircraft are retired.

c) HC-130N/P "King"

AFR has five HC-30N/P aircraft assigned at Patrick AFB, FL. The HC-130N/P supports the combat search and rescue (CSAR) mission. This mission includes insertion, infiltration/exfiltration, and resupply of rescue forces engaged in isolated personnel rescue. The HC-130P/N also conducts helicopter air refueling of rotary wing rescue assets. Due to the versatility of the HC-130N/P, national rescue authorities task the HC-130N/P to perform missions across the range of military operations including civilian search and rescue, emergency aero-medical evacuation, disaster relief, international aid, counter drug, and National Aeronautics and Space Administration (NASA) space shuttle astronaut rescue and recovery support.

The entire HC-130 fleet is pending replacement through the HC/MC tanker recapitalization program, but it will remain as a "mixed fleet" with newer HC-130Js until at least FY 2021. Modifications in progress are SADL and over the horizon communication systems. An interim data link installation was completed in FY 2009, to be followed by a more robust and permanent data link and SLOS/BLOS communications suite planned in FY 2012. Future upgrades include crashworthy loadmaster seats, defensive system suite integration, and engine oil cooler upgrades.

d) HH-60G "Pave Hawk"

AFR has 13 HH-60G assigned helicopter aircraft between Patrick AFB, FL, and Davis-Monthan AFB, AZ. These aircraft conduct CSAR for recovery of downed aircrew and other distressed personnel from hostile environments. Other HH-60G support missions include civilian search and rescue, emergency aero-medical evacuation, disaster relief, international aid, counter drug activities, and NASA launch range support.

Major ongoing modifications include improved aircraft ballistic armor, SADL, Multi-function Color Display, Improved Altitude Hold Hover Stabilization, and a LARS Radio V12 is ready to be fielded.

Cancellation of the Air Force's CSAR-X helicopter replacement program will have a major impact for the AFR as an estimated 58 percent of the entire AF Pave Hawk fleet of 99 helicopters will exceed service life of 7,000 hours by FY 2015. This adds new urgency to execution of a HH-60 recapitalization plan.

v. Aerial Refueling Aircraft

a) KC-135 "Stratotanker"

AFR KC-135R Stratotankers conduct global aerial refueling operations for U.S. and allied aircraft and 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 and conduct aero-medical evacuation. AFR KC-135R aircraft are assigned to Andrews AFB, MD; Grissom ARB, IN; March ARB, CA; Seymour-Johnson AFB, NC; and Tinker AFB, OK. AFR squadrons equipped with KC-135 aircraft provide 15 percent of the AF KC-135 aerial refueling capability.

vi. Training Systems

a) C-130 H2 and H3 Weapon Systems Trainers (WSTs)

AFR uses C-130H WSTs to train Active, Guard, and Reserve C-130H pilots, flight engineers, and navigators. The C-130H WSTs simulate all cockpit instruments, including ground-mapping radar and air defensive systems, and support night vision goggles, tactical, low level, and airdrop training. Stand-alone navigation trainers supplement each C-130H WST to provide C-130H navigators with quality training in over-water flight procedures and airborne radar approaches.

b) C-5 Weapon Systems Trainers

AFR has three C-5 WSTs. The C-5 WST at Westover ARB, MA, has the unique capability to train crews in both air refueling and conventional air-land mission procedures. The other two C-5 WSTs, located at Lackland AFB, TX, have state-of-the-art hydraulic motion bases and large wrap-around, out-the-window visual systems, and they comply with FAA level C+ Standards. Lackland C-5 WSTs support the training of the Pilot, Copilot, and Flight Engineer positions for mission qualification, upgrade, and continuation training. In addition, all C-5 WSTs provide maintenance personnel Maintenance Engine Run training.

c) A-10 Full Mission Trainer (FMT)

AFR A-10 FMTs currently operate in a networked/DMO and Live-Virtual-Constructive training environment. AFR A-10 FMTs support critical-to-mission training capabilities and normal, emergency, instrument, weapons, and tactics procedures. DMO training adds new war-fighting capability allowing geographically separated A-10 FMTs and ground-based joint terminal attack controllers to participate in realistic training scenarios.

AFR has four A-10 FMTs: two at Whiteman AFB, MO, and two at Barksdale AFB, LA. In FY 2008, ACC funded and replaced the Barksdale A-10 FMT 360-degree visual systems with newer, more reliable, and capable digital projectors. ACC replaced the Whiteman FMT with two PE-modified A-10 FMTs in November 2009 and March 2010. A-10 FMTs have just become concurrent with the aircraft.

d) F-16 Multi-Task Trainer (MTT)

The five AFR F-16 MTTs support mission training capabilities and normal, emergency, instrument, weapons, and tactics procedures as well as systems training for F-16 Block 30 qualified AFR, ANG, and ACC pilots. Once facility construction is complete, AFR will have two operational F-16 MTTs located at Homestead ARB, FL, and two at JRB Fort Worth, TX. The fifth is located at Mesa, AZ, and is used for testing purposes. Multi-terabyte hard drive systems allow the F-16 MTTs to use the same mapping databases as the A-10 FMTs.

AFR F-16 MTTs can connect to ARCNet allowing them to participate in networked training on a limited basis. The F-16 MTTs will not have full DMO network capability until current efforts are complete to purchase ACC-funded 360-degree visual systems. The F-16 MTTs are currently upgraded to Software Core Upgrade 7 and provide Tactical/Theater Airborne Reconnaissance System training. AFR requirements specify upgrade of these devices to full tactical mission capability and full DMO over the next several years.

vii. Guardian Angel Weapons System

Guardian Angel (GA) is an AF CSAR weapon system consisting of combat rescue officers; pararescuemen; survival, evasion, resistance, and escape specialists; and support equipment dedicated to prepare, report, locate, support, recover, and reintegrate isolated personnel. Three AFR GA Squadrons assigned to the 920th Rescue Wing support both the HH-60 and HC-130 rescue platforms and occasionally operate independently during selective ground operations.

AFR is accomplishing GA modernization through two increments funded by ACC, the lead command. Increment One is focused on sustaining and modernizing existing capabilities and equipment and is currently in progress. Increment Two is focused on developing a fully integrated family of systems interoperable with HH-60 and HC-130 programs.

b. Average Age of Current Equipment

As the average age of aircraft increases, there is a direct correlation to a demand for more operation and maintenance funding to continue the capability. This increase is driven by a multiple number of factors such as: a greater demand for part replacement, which has exceeded the life cycle and can be complicated by disappearing vendors due to industry moving into newer aircraft; also, less efficient operational costs of these aircraft drive up flying hour cost; the mean time between failure also goes down due to age, which then creates a greater maintenance requirement and less aircraft availability. These contributing factors must be addressed to sustain the capabilities required to meet national defense demands.

See *Table 2* for the average age of selected major items of equipment as of the beginning of FY 2011.

c. Compatibility of Current Equipment with AC

AFR equipment requires compatibility with the AC to support applicable AF missions with the exception of "unique" missions performed by AFR, e.g., weather, aerial spray, and firefighting.

With Congressional funding received to-date, AFR is able to keep its mission equipment compatible with the AC.

d. Maintenance Issues

i. C-5A/B Maintenance Issues

C-5A aircraft floor fitting end caps are developing corrosion cracks, and, when found, lead to flight restrictions and potential aircraft grounding. Floor fitting end cap costs are unfunded at approximately $610K per aircraft. If not corrected, significant restrictions and aircraft groundings will occur and negatively affect aircraft availability. Delamination repair of C-5A exterior panels are also an unfunded cost averaging $2.5M per aircraft. Delaminated panels may not be repairable, and availability of replacement panels is limited. Additionally, C-5B horizontal tie boxes are developing corrosion cracks and, when found, require severe flight restrictions. Unfunded costs for tie box doubler installation total $6.0M for four aircraft through FY 2012 ($1.5M per aircraft - one aircraft FY 2011; three aircraft FY 2012).

ii. A-10 Maintenance Issues

Currently, the A-10 fleet's wings are being replaced by a refurbished wing. No critical structure issues have been identified with the refurbished wings. Beginning in FY 2011, the Air Force will begin complete thin-skin wing replacements with a newly manufactured wing on the A-10. The majority of AFR A-10s are thin-skin wing aircraft. Four of the wing replacements scheduled in FY 2011 are unfunded ($15.72M).

iii. KC-135 Maintenance Issues

The major issue for the KC-135 fleet is program depot maintenance (PDM) late deliveries. The KC-135 is scheduled for 180 days (organic) and 220 days (contracted). Organic PDMs are running approximately 220 days and contracted PDMs are running close to 300 days. The organic PDM line (Oklahoma City – Air Logistics Center [OC-ALC]) has suffered from materiel shortages, forced workarounds, and lack of timely technical disposition. They have also experienced aging aircraft issues including major structural defects driving PDM flow days. The contracted PDM line (Boeing San Antonio and Alabama Aircraft Industries, Inc.), has dealt with the same materiel and structural issues along with worker inefficiencies caused by loss of experienced personnel. In FY 2011, Boeing San Antonio becomes the only contracted KC-135 PDM site, and OC-ALC has plans in work to reach goals of 130 organic PDM flow days and 130 contract PDM flow-days for FY 2011.

e. Modernization Programs and Shortfalls

Congress initiated NGREA funding in December 1981 to address RC readiness issues. Public laws and legislative language established this equipment appropriation to reduce RC shortfalls in readiness, combat capability, and modernization. NGREA funding augments, and sometimes replaces what little funding AC lead commands are able to provide to modify AFR equipment. AFR generally does not receive or POM for procurement or RDT&E funding.

In general, there are several areas that need attention to ensure modernization of AFR equipment requirements. Primarily, these modernization efforts stress communications, aircraft defense, and Precision Engagement. The information demands of modern warfare require a fully integrated data-link network. A robust persistent airborne gateway system and SLOS and BLOS voice and data communications support that integrated data-link requirement. The current urban battlefield demands low collateral damage and drives a requirement for spiral procurement of advanced sensors to include LITENING G4 (fourth generation) ATP and HMIT. AFR aircraft require self protection suites that are effective against modern anti-aircraft missile systems. Simulators and other training devices must keep current with aircraft systems and provide high fidelity for realistic mission training. Linking simulators in diverse locations provides realistic training opportunities and helps overcome issues created by operations tempo and resource limitations. Compounding this is the operations tempo of our Agile Combat Support units and the requirement to replace and modernization equipment.

The following are the AFR shortfalls categorized by major weapon systems as identified through the AFRC corporate process in the development of the FY 2012 Equipment Modernization Roadmap.

i. Fighter Aircraft

a) F-16

A HMIT would allow pilots to rapidly target sensors and advanced weapons and to stay aware of critical developments in flight. A HMIT would also allow the F-16 to take full advantage of the AIM-9X off-bore sight capability. The LITENING G4 ATP spiral upgrade will provide advanced sensors in conjunction with the HMIT that will significantly improve target location and identification, weapons employment, and battle damage assessment. AFR F-16s also require an over the horizon/BLOS communication capability to meet the demands of the combat commanders.

b) A-10

AFR A-10s have several modernization requirements. Installing an AAR-47 IR MWS will significantly improve situational awareness and survivability by automatically detecting the launch of SAMs. Just as with the F-16, HMIT in conjunction with the LITENING G4 ATP spiral upgrade would allow rapid targeting of sensors and advanced weapons and would help pilots stay aware of critical developments in flight. Finally, the present tactical employment of the A-10 requires operations at airfield elevations and environments 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

Near-term AFR B-52 fleet enhancements still under consideration, but lacking full funding and system development maturity, are electronic warfare (both defensive and offensive capabilities to support standoff and penetration missions) and bomb bay smart weapons carriage capabilities. The B-52H has an immediate requirement for TDL capability to provide near real time situational awareness updates of friendly positions and enemy air/ground threats. The battlespace can change significantly during the long duration of B-52H missions, and a data link system would provide critical target updates during flight. While the CONECT program goes a long way to providing a

data link solution for the B-52, EPLRS/SADL is lacking in the CONECT program to provide critical real-time friendly positions during close air support missions. Installing EPLRS/SADL radios on the B-52 in conjunction with Aviation Modernization Improvement is a potential interim solution to provide TDL capability without delay to CONECT. The LITENING G4 ATP spiral upgrade will improve the B-52 capability for target location and identification, weapons employment, and battle damage assessment. The B-52 has no DMDS. Now that the primary function of AFR B-52Hs is to support flying training, the ability to properly train and debrief students is imperative for the 917th Wing mission to properly train and debrief students.

iii. Airlift/Special Missions Aircraft

a) HH-60G and HC/MC-130—Combat Search and Rescue (CSAR)

Military contingency operations require CSAR support. The 920th Rescue Wing HH-60G helicopters and HC-130 aircraft are low-density/high-demand (LD/HD) assets in constant demand by multiple agencies and support ongoing operational and contingency missions. To remain a viable combat platform, the HH-60 requires significant modifications and upgrades. Additional Congressional funding was received by ACC in FY 2008 for the HH-60 modernization program; however, contractual issues at the System Program Offices have created significant delays in upgrading the aircraft. Programs delay could extend in to late FY 2012. For the long term, an AF program attempting replacement of the aging HH-60 helicopter fleet has been delayed. As a result, the AFR may fly this aircraft well beyond FY 2020, thus creating long-term sustainment issues.

The AFR expects to replace HC-130 tankers starting in FY 2018, as many of these airframes have over 45 years of service. For the AFR to maintain the capability to meet combatant commander requirements and HD taskings in the near future, it is critical that both the HH-60 and HC-130 aircraft are replaced on a one-for-one basis. The demands being placed on these airframes as LD/HD assets are wearing these airframes out at an accelerated rate. Both these replacement aircraft have been POM'ed for in the ACC POM. AFR HC-130 replacements will run approximately $600M, the HH-60 replacement costs have not yet been determined.

AFR MC-130E aircraft are planned to be retired no later than FY 2015. In the next several years, however, AFR MC-130E aircraft will continue to be in very high demand, and use in harm's way will drive the requirement for low cost temporary communications and situational awareness systems to fulfill mission demands.

b) WC-130

The National Hurricane Operations Plan requires tasked reconnaissance missions to be flown at altitudes too low for radar coverage and line-of-sight communications, yet within FAA-controlled airspace. To ensure maximum safety for aircrews during hazardous hurricane weather conditions and to update the FAA with airspace requirements during tasked weather missions, real-time, dependable communications with the FAA are essential. A significant shortfall in the WC-130J capability is its lack of a civilian SATCOM radio. FY 2010 NGREA funds have been applied to procure a civilian satellite phone to provide aircrews this needed capability.

c) C-130

Current ongoing modifications to AFR C-130H aircraft include NVIS windscreens (funding completed with FY 2009 NGREA), a Yoke-mounted Countermeasures Dispenser Switch (funding completed with FY 2010 NGREA), an APN-241 navigation and ground mapping radar (funding completed with FY 2010 NGREA), LAIRCM, and a RTIC system that provides SLOS/BLOS communications and data link to improve aircrew situational awareness, protection, and weapon system reliability. Additionally, funding has been applied for new 12.7mm/.50cal resistant aircraft armor for critical aircraft components and crew protection, computerized take-off and landing data, large square window doors for improved SAFIRE Lookout capability, and crashworthy loadmaster seats. The following mission critical upgrades are required for the continued modernization and success of the C-130H: new sensors for the MWS, an upgraded RWR, single pass precision air drop capability, improved NVIS cockpit lighting, a terrain avoidance warning system, and vertical electronic warfare training capability. Lastly, unless a replacement for the 20+ year old Modular Aerial Spray System (MASS) is funded for the Air Force's only aerial spray unit, located at Youngstown ARS, OH, the Air Force will lose its capability to satisfy the DoD-mandated mission of maintaining a large area fixed-wing aerial spray capability to control disease-carrying vectors, pest organisms, and vegetation, and to treat oil spills. Approximately $12M is required for the MASS in FY 2012–FY 2013.

d) C-5

Structural issues within the C-5 fleet are a significant concern: aircraft crown skins, contour boxes, and batman fittings are developing corrosion cracks that, if not addressed, will result in a significant reduction in aircraft availability beginning in FY 2013. Approximately $176M is required; $44M beginning FY 2012–FY 2015. LAIRCM for AFR C-5 aircraft is currently not funded. Reduced aircraft availability is projected for the C-5 fleet due to major maintenance issues (structural cracks) and reduced Weapons System Sustainment (WSS)/Depot Purchased Equipment Maintenance (DPEM) funding.

iv. Aerial Refueling Aircraft

KC-135 average age is over 40 years and the oldest KC-135 in active service is approaching 50 years. The Stratotanker will require several upgrades to remain viable and effective until replaced by the future KC-X tanker. Installing LAIRCM on the KC-135 will reduce the risk of losing an aircraft to an IR-guided missile during takeoff, landing, or low-level aerial refueling operations. In addition, night vision compatible lighting (internal and external) and data link communications will keep the KC-135 viable and able to support receiver aircraft in a combat environment.

v. Equipment for New and Expanding Missions

Expanding and new missions dictate new equipment requirements to support those missions. Our security forces require weapons upgrades for sniper teams (24 startup unit type codes), and our new missions in RPA, C2, and ISR require training equipment to provide mission-ready personnel as part of the Total Force.

vi. Agile Combat Support (ACS) Equipment

ACS is a distinctive AF capability used to deploy military power, respond to global taskings, and establish forward base structures. It creates, sustains, and protects all air and space capabilities. ACS includes Expeditionary Combat Support and 26 functional areas that organize, train, equip, employ, control, and sustain forces. ACS ensures operations are established within days instead of weeks or months and is crucial to meeting the demands of today's rapidly changing environment. The AFR has identified at least $104.8M in unfunded procurement and Operation and Maintenance requirements from these 26 functional areas.

a) Support Equipment and Vehicles

AFR has a current shortfall of approximately $90M for support equipment sustainment across all functional areas within the command. Assets required for procurement includes such items as maintenance stands, avionics test stations, tow bars, radios, small arms, and night vision devices. AFR also has a current shortfall of $10M for vehicle procurement and replacement. At this rate, the AFR recapitalization period for vehicles is approximately 20 years. Maintaining vehicles that have surpassed their service life requires more funding for vehicle maintenance accounts.

b) Security Forces and Civil Engineering

AFR Security Forces personnel train for contingency deployments and provide home-station security for continental United States (CONUS) AFR installations. With over 3,000 assigned Security Forces members, they provide security of personnel and priority resources at home-station and deployed locations through law enforcement patrols, integrated base defense, and antiterrorism/force protection initiatives.

Prime base engineer emergency forces (Prime BEEF) are combat support forces that are generally configured as squadrons and teams. Their mission is to provide combat civil engineering support to the air combat forces which are, or may become, a part of a theater, command, or task force formed for combat operations. RED HORSE civil-engineering squadrons are wartime-structured units that provide a heavier engineering capability than the civil engineering Prime BEEF units.

AFR Security Forces, Prime BEEF, and RED HORSE personnel require modern tactical equipment and weapons suites with which to train and deploy. Recent programmatic actions have resulted in the formation of two new AFR Security Forces Squadrons, three new AFR RED HORSE squadrons, and personnel growth within over 25 existing squadrons to support new mission taskings. Increased manning, concurrent with new mission growth (including precision engagement requirements for Security Forces), exacerbates current equipment and weapons allocation shortfalls. AFR expeditionary combat support personnel perform outside-the-wire patrols, convoys, and mission operations in forward-deployed areas. Modern tactical equipment, vehicles, and weapons suites including M4/M203/M240B/M249 are required for today's missions.

f. Overall Equipment Readiness

Presently, AFR weapons systems maintain equipment readiness on par with the AC, except where limited by modernization restrictions or WSS/DPEM funding. 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 has continued to improve capabilities notwithstanding constrained resources. As the 2008 Program Decision Memorandum III manpower increases of 4,256 authorizations are fielded, a commensurate requirement for tactical equipment for our increasing number of security forces is needed. Cyber requirements for C2 and ISR forces are increasing as well.

- The fourth C-40C was delivered to Scott AFB, IL.

- The first AFR A-10 squadron at Whiteman AFB, MO, has completed A-10C upgrade, and the A-10 squadron at Barksdale is in A-10C transition. AFR A-10s are scheduled to complete A-10C upgrade by January 2011.

- Completed LAIRCM modification on three C-40 aircraft; one has been deployed to the AOR.

- All AFR C-130Hs LAIRCM capable and 50 percent LAIRCM equipped

- Thirteen AFR C-5As modified with defensive systems

- Continued to upgrade C-130s with APN-241 Radar, funding in place to complete modification on all AFR C-130s

- Continued installation of a yoke-mounted expendables dispense switch on C-130H aircraft

- Initiated modification of a RTIC system on C-130H aircraft

- Initiated procurement and installation of a civilian satellite phone for WC-130J "Hurricane Hunter" aircraft

- Initiated installation of NVIS-compatible windscreens on C-130H aircraft

- Air Force Reserve B-52 aircraft have been modified to accept smart multi-function color displays; this modification will increase target identification capabilities

C. Future Years Program (FY 2012–FY 2014)

1. FY 2014 Equipment Requirements

The Procurement Requirements Lists has recently been finalized through the AFR Corporate Structure process, with the top ten unfunded requirements listed in *Table 8 Significant Major Item Shortages*. Total procurement unfunded requirements total approximately $960M; top ten unfunded is $117.5M. Top ten unfunded requirements include: C-130 LAIRCM; C-130 SLOS/BLOS capability; A-10/F-16 Helmet-mounted Cueing System; Grissom R-12 Mobile

Refuelers; HC-130 Integrated Electronic Warfare suite (ALQ-213) with VECTS; C-130 SAFIRE Lookout capability; C-130 MASS; and security forces tactical equipment and weapons.

2. Anticipated New Equipment Procurements

Table 3 Service Procurement Program – Reserve (P-1R) provides the list of planned procurements for the AFR from the FY 2012 President's Budget.

Table 4 NGREA Procurements provides a complete list of AFR planned NGREA-funded procurements for FY 2009–FY 2011.

3. Anticipated Transfers from AC to RC

Ten new HH-60M aircraft will transfer to the AFR starting in FY 2013.

Two C-130J aircraft will transfer to Keesler AFB, MS in support of the Active Associate beginning the 4th quarter of FY 2011.

Eight C-17As (four in FY 2011 and four in FY 2012) will transfer to Wright-Patterson AFB, OH to replace the ten C5As that are being retired to the Aerospace Maintenance and Regeneration Group (AMARG).

4. Anticipated Withdrawals from RC Inventory

Ten C-5As will transfer to AMARG (five in FY 2011 and five in FY 2012). Ten AFR HH-60Gs will transfer to the AC starting in FY 2013.

5. Equipment Shortages and Modernization Shortfalls at the End of FY 2014

The AFR annually publishes Equipment Modernization Roadmaps as formal documents that are the culmination of a formal AFRC requirements process. This process begins at the squadron level and is finalized at the command through the Corporate Structure. AFRC Corporate Structure Panels receive the AFR MAF, CAF, and ACS requirements, rank those requirements, and forward them through the Corporate Group and council for approval of unfunded requirements. Available funding only covers a small percentage of equipment requirements for the AFR. Recent finalized Procurement Unfunded Requirements Lists total approximately $960M.

D. Summary

AFR Selected Reserve units are fully capable of meeting required contingency response times. This impressive capability is the RC model of integration. Modernization is the key to not only maintaining this effective force, but also improving the capability of the warfighter.

Over the last year, the AFR has greatly increased capability to the warfighter through modernization which added SLOS/BLOS and data link communications, digital data recorders, advanced digital/analog secure video data link to ground forces, and improved weapons employment in the F-16, A-10A+/C, HH-60, HC-130, and B-52 AFR CAF. On the AFR MAF side, the AFR has significantly enhanced combat defensive capabilities in both strategic and

tactical airlift, to include CSAR platforms, with C-5 armor kits, C-130/HC-130 LAIRCM, improved all-weather situational awareness, C-130 APN-241 radar, and improved the C17A airlift capability with palletized seats.

Over the next year, the AFR will complete SLOS/BLOS on all AFR fighters, provide permanent TDL for AFR CSAR assets, introduce fourth generation LITENING ATP sensors and capabilities on AFR A-10A+/F-16/B-52 platforms, continue to advance airlift defense capability with C-130 SAFIRE tactical lookout, and start installation of C-5 ADS. Our space aggressors will receive a new Integrated Multiple Antenna Terminal Electronics SATCOM Jammer in support of their mission, moving away from GPS jamming and towards SATCOM jamming. Likewise, new SATCOM control training suites will allow our space controllers to be fully trained before deployments.

The AFR continues to expand its existing missions as well as moving into new mission areas. The increased missions in RPA, ISR, C2, and security forces will require a corresponding increase in investment in tactical and training equipment.

The AFR is committed to modernization efforts that meet the Total Force capability needs of the Air Force and the combatant commanders. For those modernization needs that remain unfunded, the AFR internal requirements review process prioritizes and validates vital unfunded warfighter requirements for NGREA and supplemental funding consideration.

AFR   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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Air Refueling							
Air Refueling, KC-135R	KC-135R	$50,000,000	64	64	64	64	64
Air Support							
Air Support, MC-130E	MC-130E	$90,000,000	6	4	0	0	0
Weather, WC-130J	WC-130J	$68,000,000	10	10	10	10	10
Airlift							
Airlift, C-130H	C-130H	$37,400,000	84	84	84	84	84
Airlift, C-130J	C-130J	$66,400,000	10	10	10	10	10
Airlift, C-17A	C-17A	$274,500,000	16	16	16	16	16
Airlift, C-5A	C-5A	$194,100,000	14	14	14	14	14
Airlift, C-5B	C-5B	$222,600,000	14	14	14	14	14
Airlift, C-40C	C-40C	$73,000,000	4	4	4	4	4
Bomber							
Bomber, B-52H	B-52H	$67,000,000	16	16	16	16	16
Fighter							
Fighter, A-10A	A-010A	$12,200,000	42	42	42	42	42
Fighter, F-16C	F-16C	$20,300,000	46	46	46	46	46
Fighter, F-16D	F-16D	$20,300,000	2	2	2	2	2
Rescue							
Rescue, HC-130N	HC-130N	$20,000,000	1	1	1	1	1
Rescue, HC-130P	HC-130P	$22,000,000	4	4	4	4	4
Rescue, HH-60G	HH-60G	$12,000,000	13	13	13	13	13

AFR

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 2011.

Nomenclature	Equip No.	Average Age	Remarks
Air Refueling			
Air Refueling, KC-135R	KC-135R	51	
Air Support			
Special Ops, MC-130E	MC-130E	47	
Weather, WC-130J	WC-130J	14	
Airlift			
Airlift, C-130H	C-130H	24	
Airlift, C-130J	C-130J	7	
Airlift, C-17A	C-17A	7	
Airlift, C-5A	C-5A	42	
Airlift, C-5B	C-5B	25	
Airlift, C-9C	C-9C	38	
Airlift, C-40C	C-40C	5	
Bomber			
Bomber, B-52H	B-52H	51	
Fighter			
Fighter, A-10A	A-010A	32	
Fighter, F-16C	F-16C	25	
Fighter, F-16D	F-16D	25	
Rescue			
Rescue, HC-130N	HC-130N	42	
Rescue, HC-130P	HC-130P	47	
Rescue, HH-60G	HH-60G	21	

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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.			
Nomenclature	**FY 2012**	**FY 2013**	**FY 2014**
P-1R data from FY 2012 President's Budget Submission was not available in time for publication in the NGRER.			
The FY 2012 P-1R will be available on the Office of the Under Secretary of Defense (Comptroller) public web site (http://comptroller.defense.gov/index.html) upon release of the FY 2012 President's Budget Submission.			

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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
FY 2009 Title III NGREA Equipment			
Advanced Targeting Pod (ATP) Procurement & Spiral Upgrades	$8,949,000		
Crashworthy Loadmaster Seats	5,100,000		
Helmet-mounted Cueing System; Non-recurring Engineering (NRE) & Low Rate Initial Production (LRIP)	5,014,500		
C-130 Surface-to-air Fire (SAFIRE) Lookout Capability	5,000,000		
A-10 Missile Warning System; Groups A & B	3,925,500		
Security Forces Tactical Equipment Purchases	3,100,000		
C-130 APN-241 Radar	2,440,000		
F-16 Imagery & Data Transfer/Cursor On Target	2,000,000		
F-16 Upgraded Commercial Fire Control Computer (CFCC)	1,860,000		
FY 2009 Title IX NGREA Equipment			
LITENING Advanced Targeting Pod (ATP)	11,700,000		
A-10/F-16 Helmet-mounted Integrated Targeting (HMIT)	7,900,000		
HC-130 SLOS/BLOS Comm/Datalink	5,400,000		
FY 2010 Title III NGREA Equipment			
A-10 Simultaneous SLOS/BLOS		$2,343,000	
A-10/F-16 Helmet-mounted Integrated Targeting (HMIT)		4,500,000	
A-10/F-16 Advanced Targeting Pod (ATP) Procurement & Spiral Upgrade		1,800,000	
B-52 Mission Data Recording System		3,200,000	
C-17 Palletized Seats		1,800,000	
C-130 SLOS/BLOS		7,500,000	
C-130 Oil Cooler Augmentation		3,950,000	
HC-130 Oil Cooler Augmentation		3,300,000	
C-130 Improved Night Vision Imaging System (NVIS) Cockpit Lighting		3,200,000	
C-130 Crash-resistant Loadmaster Seats		2,700,000	
C-130 Armor		2,607,000	
C-130 Surface-To-Air Fire (SAFIRE) Lookout Capability		2,000,000	
WC-130 Civil Satellite Communications (SATCOM)		2,000,000	
C-130 APN-241 Radar		800,000	
HC-130 Crash-resistant Loadmaster Seats		600,000	
C-130 Computerized Takeoff and Landing Data (TOLD)		500,000	
C-130 Yoke-mounted Chaff/Flare Dispensers		500,000	
F-16 Center Display Unit		4,500,000	
F-16 "Flair-Up" Modification for Pylon Integrated Dispenser System (PIDS) Flare Dispensers		2,000,000	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2009	FY 2010	FY 2011 [1]
F-16 Simulation Training Device Upgrade (PA)		1,100,000	
HH-60 Smart Multi-Function Color Display (SMFCD) & Situation Awareness Data Link (SADL)		4,000,000	
Security Forces Weapons and Tactical Equipment		100,000	
TOTAL	**$62,389,000**	**$55,000,000**	

1. FY 2011 NGREA data from FY 2011 Defense Appropriations Bill was not available in time for publication in the NGRER. Data for FY 2011 will be provided in next year's NGRER.

Table 5

AFR
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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks
Air Support					
Air Support, MC-130E		-2	-4		Program Change Request to keep 4 from FY 2013-2015; pending approval at time of reporting.

FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2008 Planned Transfers & Withdrawals							
Air Refueling, KC-135R/T	KC-135R	-8	-8				
Airlift, C-5A	C-5A	-3	-3				
Airlift, C-5B	C-5B	+1	0				
Fighter, F-16C	F-16C	+7	+8				
Fighter, F-16D	F-16D	-4	-1				
FY 2008 P-1R Equipment							
Modification of Aircraft							
B-52				$2,533,000	$0		
A-10				14,037,000	16,657,000		
F-16				14,162,000	7,663,000		
C-5				107,189,000	19,365,000		
C-17A				0	40,443,000		
C-130				95,712,000	9,815,000		
C130J MODS				20,421,000	2,490,000		
C-135				14,583,000	30,009,000		
H-60				3,639,000	5,742,000		
Aircraft Support Equipment and Facilities							
Aircraft Replacement Support Equipment				17,778,000	292,000		
Vehicular Equipment							
Passenger Carrying Vehicles				0	848,000		
Medium Tactical Vehicle				0	865,000		
Security and Tactical Vehicles				584,000	0		
Fire Fighting/Crash Rescue Vehicles				0	3,515,000		
Runway Snow Removal and Cleaning Equipment				1,918,000	2,265,000		
Items Less Than $5M (Vehicles)				5,491,000	5,096,000		
Electronics and Telecommunications Equipment							
National Airspace System				287,000	2,170,000		
Weather Observation Forecast				1,821,000	0		
AF Global Command & Control System				673,000	905,000		
Mobility Command and Control				0	264,000		
Combat Training Ranges				535,000	0		
Theater Battle Mgt C2 System				2,769,000	78,000		
Air & Space Operations Center - Weapon System				0	9,307,000		
Base Info Infrastructure				9,378,000	5,900,000		

Table 6

AFR
FY 2008 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
NAVSTAR GPS Space				323,000	0		
CCTV / Audiovisual Equipment				502,000	0		
Tactical Communications - Electronics Equipment				0	5,903,000		
Combat Survivor Evader Locater				0	8,945,000		
Base Comm Infrastructure				0	456,000		
Other Base Maintenance and Support Equipment							
Night Vision Goggles				573,000	194,000		
Mechanized Material Handling Equipment				730,000	0		
Base Procured Equipment				0	195,000		
Items Less Than $2M (Base Support)				1,077,000	700,000		
FY 2008 Title III NGREA Equipment							
C-130 SLOS/BLOS Capability (ARC-210 Radio)						$10,000,000	$5,800,000
C-130 Surface-to-air Fire (SAFIRE) Lookout Capability						7,000,000	0
C-130 APN-241 Radar						7,000,000	7,000,000
C/HC/MC-130 Crashworthy Loadmaster Seats						5,000,000	600,000
LITENING Targeting Pod Spiral Upgrade						4,295,000	5,835,000
F-16 Upgraded Commercial Fire Control Computer (CFCC)						3,600,000	3,960,000
HH-60G Tactical Data Link						1,800,000	0
A-10/F-16 Countermeasures Set (CMS) Memory Upgrade						1,500,000	2,400,000
C-5A Airlift Defensive Systems (ADS)						1,300,000	1,300,000
Combat Track II Systems						1,100,000	1,100,000
Security Force Night Vision Devices & Laser Sights						1,100,000	1,100,000
Space Electronic Warfare Trainer						500,000	8,300,000
HH-60G Mobile Aircrew Web Restraining System (MAWRS)						300,000	0
B-52 Alternate Mission Equipment						200,000	0
Dobbins Trunking Land Mobile Radios (TLMR)							3,000,000
C-130 Night Vision Imaging System (NVIS) Windscreen							1,400,000
Security Forces Tactical Equipment Purchases							2,900,000
Total				**$316,715,000**	**$180,082,000**	**$44,695,000**	**$44,695,000**

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 2012 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution To Satisfy Major Item Equipment Requirements

Table 8

AFR
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-130 Large Aircraft Infrared Countermeasures (LAIRCM)	94	21	$3,000,000	$63,000,000	System provides C-130s an advanced IR countermeasure system. Failure to install LAIRCM leaves aircraft and aircrews vulnerable to IR missiles, endangering ability to contribute to wartime efforts by exclusion from certain threat environments.
2	C-130 Secure Line of Sight (SLOS) Beynold Line of Sight (BLOS) Capability	84	55	$371,000	$20,700,000	Airlift C-130s do not have the capability for continuous secure C2 communication while operating in austere and hostile environments that require immediate updates for threats, airspace restrictions, and C2.
3	A-10/F-16 Helmet Mounted Cueing System (HMCS)	148	148	$80,000	$4,300,000	HMCS allows pilots to rapidly locate and identify targets to employ advanced weapons and stay aware of critical developments in flight to include friendly force location.
4	Grissom R-12 Refuelers	4	4	$900,000	$900,000	Without the R-12 Refuelers, the new $23.6M Hydrant system will be incompatible and inoperable with the current refueling equipment. Assigned aircraft will not be able to perform their mission without R-12 Mobile Refuelers.
5	HC-130 Integrated EW suite (ALQ-213) with VECTS	5	5	$600,000	$3,000,000	Adds ALQ-213 to integrate the defensive systems aboard all AFR HC-130 Combat Rescue aircraft. System integrates and automates detection to response processes. Allows for pre-programming of responses tailored to threat envioments.
6	C-130 SAFIRE Lookout Capability	54	26	$250,000	$7,500,000	Provides improved Surface-to-Air Fire (SAFIRE) Lookout capability by replacing existing small round window paratroop doors with large square window doors allowing greater field of view.
7	C-130 Modular Aerial Spray System (MASS)	6	6	$2,000,000	$12,000,000	Replace the current MASS with a new COTS system. This is required to meet current and future aerial spray applications directed by the Center for Disease Control, Homeland Defense, and DoD.

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
8	Security Forces Weapons & Tactical Equipment	Various	Various	Various	$4,989,777	Provide security forces and civil engineering squadrons modern weapons suites including M4, M203, M204B and M249. Tactical equipment includes night vision equipment, EOD response equipment, and tactical vehicles required to meet training and deployment readiness standards.
9	GAWS Tactical Comm Headset (PR&SOF)	250	250	$1,100	$275,000	Head set provides one mission headset for all mission phases to GAWS personnel without the need to change headsets.
10	GAWS/MC-130 Wireless Intercom	35 Tails	35	$875,000	$875,000	Wireless intercom system would expand the current intercom system of MDS's utilized by GA to ensure all GA members are able to communicate with the aircrew, maintain situational awareness, and communicate with survivors. A wireless system would allow each individual GA member to adjust the volume to his needs for effective communications and eliminate the tangle of communication cords inside aircraft.

Chapter 6
United States Coast Guard Reserve

I. Coast Guard Overview

In 1790, the First Congress of the United States established a small maritime law enforcement agency to assist in collecting the new Nation's customs duties. For the next eight years, this Revenue Marine (later called the Revenue Cutter Service) was the Nation's only naval force, and thus, was soon assigned military duties. Over time, the Revenue Cutter Service either merged with or absorbed other federal agencies. The Service acquired new responsibilities based upon its ability to perform them with existing assets and minimal disruption to its other duties. In some cases, the Service absorbed other agencies because their maritime responsibilities were seen as intersecting with or complementing its own. The result is today's U.S. Coast Guard—a unique force that carries out an array of civil and military responsibilities touching almost every facet of the maritime environment of the United States.

The Coast Guard Reserve provides the Coast Guard highly trained and well qualified personnel for active duty in time of war and national emergency, and for augmentation of Coast Guard forces during natural or man-made disasters or accidents. The Coast Guard Reserve provides the Coast Guard surge capacity and flexibility to respond to all threats and all hazards.

A. Coast Guard Planning Guidance

1. Coast Guard Defense Responsibilities

The United States Code (U.S.C.) describes the Coast Guard's authorities primarily in Titles 10, 14, and 33. The following references specifically address Coast Guard defense responsibilities:

- 10 U.S.C. 101(a)(4). "The term 'armed forces' means the Army, Navy, Air Force, Marine Corps, and Coast Guard."

- 14 U.S.C. 1. Establishment of Coast Guard. "The Coast Guard as established January 28, 1915, shall be a military service and a branch of the armed forces of the United States at all times."

- 14 U.S.C. 2. Primary duties. "The Coast Guard…shall maintain a state of readiness to function as a specialized service in the Navy in time of war…"

- 14 U.S.C. 3. Relationship to Navy Department. "Upon the declaration of war if Congress so directs in the declaration or when the President directs, the Coast Guard shall operate as a service in the Navy, and shall so continue until the President, by Executive order, transfers the Coast Guard back to the Department of Homeland Security."

- 14 U.S.C. 145. Navy Department. "When the Coast Guard is operating in the Department of Homeland Security, the Secretary shall provide for such peacetime training and planning of Reserve strength and facilities as is necessary to insure an organized, manned, and equipped Coast Guard when it is required for wartime operation in the Navy."

2. Unified Maritime Strategy

The sea services of the United States must work together more closely than ever to ensure the safety and security of the maritime system. In October 2007, the Navy, Marine Corps, and Coast Guard marked an historical first, signing a unified maritime strategy called "A Cooperative Strategy for 21st Century Seapower." This strategy commits U.S. maritime forces to the full spectrum of operations that advance peace and order, and thus, the prosperity and security of our Nation.

Today, the Coast Guard is assisting sailors and marines in the U.S. Navy-led African Partnership Station, to improve the maritime governance of African nations and foster cooperation among their countries and with the United States. While deployed with the U.S. Navy Sixth Fleet in 2008, the *U.S. Coast Guard Cutter (USCGC) Dallas* conducted theater security cooperation with maritime law enforcement officers from Cape Verde, Sao Tome and Principe, Gabon, Equatorial Guinea, Ghana, and Senegal. These efforts included the first ever joint law enforcement activities in western Africa when the *Dallas* embarked a law enforcement team from Cape Verde to enforce fisheries regulations within their exclusive economic zone. The Coast Guard has also been closely involved in international efforts to combat piracy off the Horn of Africa, working with the Navy and Marine Corps in both international engagement and tactical law enforcement. Our national security and prosperity require a close bond among the sea services, now and into the future. Over two centuries of growth, evolution, and experience have prepared the Coast Guard to provide its unique contribution to this team.

The Coast Guard's contributions to the six key military capabilities highlighted in the unified maritime strategy are:

- Forward Presence: Coast Guard cutters and other forces provide vital specialized theater security operations supporting national security and defense strategies.

- Deterrence: The Coast Guard's principal contributions are domestic deterrence to transnational, unconventional threats, primarily drug smuggling, which jeopardize our national sovereignty and border integrity, and weaken regional political stability and order at sea.

- Sea Control: The Coast Guard continues to support National interests in the Arabian Gulf, working alongside U.S. Navy and allied naval units in support of overseas contingency operations.

- Power Projection: The Coast Guard protects and escorts Navy high-value units, including Military Sealift Command ship arrivals and departures at U.S. seaports of embarkation/debarkation, moving over 6 million square feet of military cargo.

- Maritime Security: The Coast Guard fulfills the Department of Homeland Security (DHS) role as the lead Maritime Operational Threat Response (MOTR) agency in the maritime domain. The MOTR Plan provides for the U.S. Government's coordinated response to threats against the U.S. and its interests in the maritime domain by establishing roles and responsibilities that enable rapid and decisive response.

- Humanitarian Assistance/Disaster Relief (HA/DR): The Coast Guard brings highly-practiced skills, long-standing domestic authority and experience in organizing and

responding to maritime and civil disasters, to the expanded core naval service mission of HA/DR.

3. National Fleet Policy Statement

Outlined in the National Fleet Policy, dated March 3, 2006, the U.S. National Fleet consists of the integrated and interoperable combined multi-mission assets of the U.S. Navy and the U.S. Coast Guard including ships, boats, aircraft, and shore command-and-control nodes. The National Fleet combined assets provide joint force multipliers to support the broad spectrum of national security requirements from power projection to security and defense of the homeland.

As a critical component of the U.S. National Fleet, the Coast Guard maintains a high state of readiness to operate as a specialized Service alongside the Navy and Marine Corps. This relationship has evolved over two centuries of cooperation and enables the Coast Guard to execute essential military operations in peacetime, crisis, and war in support of the unified combatant commanders (COCOM).

4. An Operational Coast Guard Reserve

The Coast Guard maintains an operational reserve force, which requires reservists to be ready for three core strategic functions: maritime homeland security, domestic and expeditionary support to national defense, and domestic disaster response and recovery. The Coast Guard enhances formal and on-the-job training with augmentation to support Coast Guard missions and to facilitate Reserve force readiness. Approximately 80 percent of the Selected Reserve (SELRES) force is directly assigned to Active Component (AC) units. The remaining 20 percent is assigned to the Coast Guard's eight port security units (PSUs) or to DoD units and staffs.

Since 9/11, more than 7,700 Coast Guard reservists have been recalled under Title 10 of the U.S.C., providing maritime homeland security domestically and support to the COCOMs overseas. The majority of the Coast Guard men and women recalled for contingency operations served domestically safeguarding ports and waterways along 95,000 miles of U.S. coastline, or enforcing security zones in strategic ports on the Atlantic, Pacific, and Gulf Coasts. At the end of FY 2010, approximately 760 SELRES were mobilized under Title 10 U.S.C. 12301(d) and 12302 in support of Operations Iraqi Freedom and Enduring Freedom. The majority of them provided security for continental United States (CONUS) military outload operations; while others served as members of PSUs and maritime expeditionary security squadrons (MSRONs) operating in Iraq, Kuwait, and Bahrain, and as individuals supporting Coast Guard units in overseas contingency operations.

Since 2002, the Coast Guard has supported the Joint Task Force's mission to provide safe, secure, and humane care and custody of detained enemy combatants. During FY 2010, the Coast Guard deployed reservists to Naval Station Guantanamo Bay, Cuba to continue supporting this mission. Coast Guard assets deployed to Guantanamo Bay include maritime safety and security teams (MSSTs) and other elements to support waterside anti-terrorism and force protection security operations.

For the Coast Guard, operating in a "joint" arena often involves working with multiple federal and state agencies in response to natural and manmade disasters. Immediately following the January 2010 earthquake in Haiti, the Coast Guard, U.S. Navy, and other federal agencies and

international relief organizations, deployed to help the people of Haiti. The *USCGC Forward* arrived on scene within 24 hours of the earthquake; and, after receiving Presidential authority to mobilize reservists, PSU 307, augmented by individuals with select specialties from other PSUs, mobilized under Title 10 U.S.C. 12304 as one deployable force package to provide port safety and security in Port-au-Prince and nearby Haitian ports. In all, the Coast Guard mobilized 194 reservists for Operation Unified Response. This unified force was vital to ensuring the safe passage of relief supplies and shipping commerce in the port and surrounding waters of Haiti.

The Coast Guard is accustomed to joint operations; and thus, readily joined forces with other federal, state, and local agencies to deploy assets and expertise to the Gulf Coast states following the April 2010 Mobile Offshore Drilling Unit Deepwater Horizon explosion and pipeline rupture off the coast of Louisiana. This integrated team formed the unified command to manage the largest oil spill in U. S. history and resulting environmental catastrophe. The duration of the spill and extensive damage caused by this incident required a prolonged Coast Guard presence. More than 2,500 Coast Guard reservists mobilized for Deepwater Horizon under Title 14 U.S.C. 712. The majority of them deployed to the Gulf Coast states to support response operations, while others stood watches or provided mobilization support in other locations.

Today, as U.S. troops withdraw from Iraq, Coast Guard Redeployment Assistance and Inspection Detachment (RAID) teams, comprised entirely of reservists, work with the DoD Services to inspect and track military cargo containers leaving Iraq. Working with Army container tracking systems and Navy customs inspections, the RAID teams provide oversight on the packaging, segregation, manifesting, and placarding of cargo in military containers and vehicles. Thus, Coast Guard RAID teams will continue to be an important U. S. asset when military equipment is again redeployed from other forward operating locations.

Whether in the joint arena or singularly on the high seas and ports and waterways, the Coast Guard's operational reserve force stands ready to perform three core strategic functions: maritime homeland security, domestic and expeditionary support to national defense, and domestic disaster response and recovery.

B. Coast Guard Equipping Policy

1. Operations Equipment

The DHS budget provides equipment for Coast Guard domestic operations.

The Coast Guard's AC units provide equipment for mobilization under 14 U.S.C. 712 or for surge operations, from existing unit inventories, supporting units, or through procurement procedures using the DHS budget.

The Coast Guard AC owns and manages all Coast Guard equipment, including reserve-centric equipment.

DoD provides specific equipment for the Coast Guard to perform defense operations in support of the COCOMs. 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, 378-foot high

endurance cutters, 270-foot and 210-foot medium endurance cutters, 110-foot patrol boats, PSUs, and the Engineering Logistics Center's Mobile Support Unit (MSU).

2. Personal Protective Equipment

Coast Guard unit operations and maintenance budgets provide personal protective equipment (PPE) for all Coast Guard personnel.

Mobilization for maritime homeland security, domestic and expeditionary support to national defense, and disaster response requires Coast Guard reservists to maintain skills and competencies in seven key areas: boat operations, contingency planning and response, expeditionary warfare, marine safety, port security, law enforcement, and mission support.

Approximately 5,000 billets or about 62 percent of the Coast Guard Reserve have mobilization requirements in these seven key areas and are required to wear PPE to safely conduct Coast Guard operations. PPE has historically been funded through the Office of Boat Forces (CG-731), but there is a gap between the amount of funding available and the amount required. Funding for PPE is based on a five-year cycle, which means that, at the end of a five-year period, the unit would have received enough funding to fully outfit each member with new/serviceable equipment. The five-year cycle was developed in part based on the equipment service life and the member assignments and transfers.

We estimate approximately $500K shortfall per year for Reserve PPE. Table 6-1 provides the FY 2011 Reserve PPE funding shortfall based on a 5-year replacement cycle.

The absence of required PPE directly impacts Reserve mobilization readiness. Reservists who are not properly outfitted are typically unable to perform Coast Guard operations, and thus unable to achieve or maintain their mobilization competencies.

Table 6-1. Coast Guard Reserve FY 2011 PPE Funding*

Unit/PPE Type	Cost	# of Personnel	Total	Total/Year
Ashore (Reserve) Basic Ensemble (Station)	$1,508	1,967	$2,966,236	$593,247
Ashore (Reserve) Cold Ensemble (Station)	$1,450	1,419	$2,057,550	$411,510
Ashore (Reserve) Basic Ensemble (ANT)	$1,508	11	$16,588	$3,318
Ashore (Reserve) Cold Ensemble (ANT)	$1,450	4	$5,800	$1,160
Sector Ops (Reserve) Basic Ensemble	$1,508	740	$1,115,920	$223,184
Sector Ops (Reserve) Cold Ensemble	$1,450	416	$603,200	$120,640
Tactical (Reserve) Basic/Cold Ensemble (Maritime Security Response Team)	$2,958	124	$366,792	$73,358
Tactical (Reserve) Basic/Cold Ensemble (PSU)	$2,958	320	$946,560	$189,312
PPE per Person Total		5,001	$8,078,646	$1,615,729
Total	$8,078,646			
Total/Year	$1,615,729		Annual Shortfall	
Total Available	$1,119,775		$(495,954)	

* FY 2011 PPE funding based on a 5-year replacement cycle.

C. Plan to Fill Mobilization Shortages in the RC

The Coast Guard periodically reviews the optimal structure and size of the SELRES to ensure it aligns with the intent of the Reserve Component (RC) as described in 10 U.S.C. 10102. The Deepwater Horizon oil spill response in 2010 highlighted a shortfall in SELRES strength when demand for reserve mobilization under Title 14 U.S.C. 712 exceeded authorized time limits. Under this law, Coast Guard Reserve mobilization orders must not exceed:

- 60 days in any 4-month period,

- 120 days in any 2-year period.

Given these limitations, the Coast Guard was unable to retain reservists on involuntary active duty beyond 60 days. As a "stop-gap" measure, reservists who volunteered and were approved for voluntary active duty were issued Active Duty for Operational Support of the AC (ADOS-AC) orders under 10 U.S.C 12301(d) upon completion of their Title 14 orders. The restriction on the duration of reserve recall during Deepwater Horizon response operations also prompted a request to amend the duration of involuntary active duty under Title 14 U.S.C. 712 to not more than 120 days at one time for a Spill of National Significance. This language was included in the Coast Guard Ready Reserve Response Act that moved through Congress in 2010.

D. Initiatives Affecting RC Equipment

Approximately 80 percent of SELRES use unit-level equipment acquired and supported by standard operational funding mechanisms. The remaining SELRES are assigned to deployable PSUs, MSRONs, and Maritime Expeditionary Security Groups. The following initiatives were pursued in recent years:

- The initial phase of the Reserve Force Readiness System (RFRS) was implemented in 2009 as part of the Coast Guard's overall modernization effort. RFRS maximizes SELRES mobilization readiness and training objectives by placing Full-time Support (FTS) personnel in direct support of reservists at all levels of the organization.

- The Atlantic and Pacific Area Chiefs, Reserve Force Operations Division direct Reserve program execution for reserve forces for their respective operational commands to ensure a ready Reserve force. As each Area Commander's principal Reserve force advisor and subject matter expert, these division chiefs interpret policy, validate unit-level training, and mitigate gaps that prevent Reserve force readiness. In addition, they oversee mobilization and demobilization, and manage Reserve assets.

- The first step of the Coast Guard modernization effort was establishment of the Deployable Operations Group (DOG), commissioned in 2007. The DOG provides organized, equipped, and trained adaptive force packages to Coast Guard, DHS, DoD, and interagency operational and tactical commanders. Twelve percent of Coast Guard SELRES are assigned to DOG units. The DOG includes the National Strike Force, Tactical Law Enforcement Teams, PSUs, MSSTs, and the Maritime Security Response Team. The DOG maximizes and sustains superior mission execution by ensuring interoperability and standardization across deployable specialized force units.

E. Plan to Achieve Full Compatibility between AC and RC

The Coast Guard's fully integrated operational Reserve force serves as a force multiplier for all AC missions. As a result, SELRES training and mission execution are performed side-by-side with AC personnel. Additionally, the PSUs and Maritime Expeditionary Security Commands, which are mostly reserve-staffed, are specifically organized for outside the continental United States (OCONUS) military operations.

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 2010 provided $133.6M for necessary Coast Guard Reserve expenses as authorized by law: operations and maintenance of the reserve program, personnel and training costs, 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 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 primary functions: maritime homeland security, domestic and expeditionary support to national defense, and response to and recovery from domestic disasters, natural or manmade.

Foremost, the Coast Guard Reserve must be ready for activation, at all times, to provide surge capacity during national emergencies or overseas contingencies. Training, including normal drill periods and two-weeks 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 may be employed in day-to-day operations structured to complement mobilization readiness requirements.

The Coast Guard SELRES is staffed at 8,100 billets, which is about 20 percent of the uniformed Coast Guard strength.

Reserve staffing for DoD contingency operations is shown in Table 6-2.

Table 6-2. FY 2010 DoD Contingency Reserve Staffing

	Officers		Enlisted	
Unit Type (number of units)	Active	SELRES	Active	SELRES
Port Security Unit (8)	8	93	40	900
Maritime Expeditionary Security Squadron (4)	0	28	0	7
Maritime Expeditionary Security Group (2)	0	2	0	1
Joint Reserve Unit (4)	0	43	0	18
Deployable Operations Group (1)	59	12	28	16
Maritime Safety and Security Team (12)	0	7	0	105
Strike Team (3)	0	14	0	87
Tactical Law Enforcement Team (2)	0	2	0	14
Grand Total	67	201	68	1,148

2. Status of Equipment

a. Equipment On-hand

Table 1 identifies the major equipment inventory for FY 2012–2014. All equipment is procured and accounted for by the AC.

There are two main platforms available for reserve mobilization and training: the Defender Class Response Boat and the transportable port security boat (TPSB). The Defender Class serves as a mobilization platform for nearly 2,000 reservists assigned to Coast Guard stations throughout the nation. The TPSB is the platform for members assigned to PSUs.

Defender Class Response Boat

Transportable Port Security Boat

b. Average Age of Major Items of Equipment

As specified in *Table 2*, the average age of SELRES equipment is 10 years or less, and could be a factor affecting equipment readiness.

c. Compatibility of Current Equipment with AC

The TPSBs are maintained only in the PSU inventories due to their unique mission; however, the communications, weapons systems, and navigation packages are the same as those found in the AC.

d. Maintenance Issues

None. Units maintain an adequate preventative maintenance schedule.

e. Modernization Programs and Shortfalls

Current boat resources are inadequate to support rapidly changing in-theater COCOM requirements. The Coast Guard has launched an initiative to reevaluate operating requirements and environments in an effort to update its boat resources in support of OCONUS contingency requirements. Expect project completion first or second quarter of FY 2011.

f. Overall Equipment Readiness

Equipment is in a manageable state of repair. Continued operation tempo indicates that the equipment continues to decline at a minimal rate.

g. Summary/Conclusion

There are major equipment issues that hinder training and potentially affect the utilization of the Reserve force. While there is no immediate negative impact to mission capability, the degradation in training capability due to lack of available resources will ultimately impact unit capabilities to support operations.

B. Changes Since Last NGRER

None.

C. Future Years Program (FY 2012–FY 2014)

1. FY 2012 Equipment Requirements

COCOM contingency plans validate requirements for deployable Coast Guard units. The Coast Guard has one 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

None.

3. Anticipated Withdrawals from RC Inventory

None.

4. Remaining Equipment Shortages and Modernization Shortfalls at the End of FY 2014

Ten small boat stations do not have a mobilization platform (Defender Class "A" or "B") available for training. The absence of a Defender Class platform impacts the mobilization readiness of reservists assigned to those units. At a cost of $192K per Defender Class boat, that is a shortfall of $1.92M.

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

D. Summary

The U.S. Coast Guard is a military, multi-mission, maritime Service. The Coast Guard Reserve is an operational Reserve that stands ready to perform Coast Guard missions each and every day. The RFRS, established in 2009, placed the Coast Guard Reserve on the leading edge of Coast Guard organizational design. By placing Reserve readiness managers or FTS personnel in operational units where most reservists are assigned, we provide commands with direct access to Reserve expertise while also providing direct readiness support to reservists. The Atlantic and Pacific Area Commands direct Reserve program execution to ensure a ready reserve force, while also managing and coordinating Reserve forces to optimize Coast Guard Reserve readiness and capabilities.

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 2012 Unit Cost	Begin FY 2012 QTY O/H	Begin FY 2013 QTY O/H	Begin FY 2014 QTY O/H	End FY 2014 QTY O/H	End FY 2014 QTY REQ
Port Security Units (PSUs)						
25' Transportable Port Security Boat (6 per unit)	$220,000	48	48	48	48	48
175hp Outboard Motor (2 per boat and 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 and 2 spares at each unit)	$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	$2,000,000	8	8	8	8	8
Mobile Support Units (MSUs)						
Trailer, Connex Box	$30,000	18	23	23	23	23
Truck, Pick-up	$45,000	3	2	2	2	2
Truck, Stakebed	$50,000	6	4	4	4	4
Truck, Tractor Trailer	$105,000	2	2	2	2	2
Forklift, 10,000 lb.	$30,000	2	2	2	2	2
Forklift, 6,000 lb.	$20,000	1	1	1	1	1
Generator, Microsilent 10kW	$23,000	4	4	4	4	4
Kitchen, Portable	$50,000	2	2	2	2	2
Welding/Cutting Shops, Portable	$30,000	2	2	2	2	2
A/C - H/P (Air Rover Units) w/25kW Generators	$40,000	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
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 2011.

Nomenclature	Average Age	Remarks
Port Security Units (PSUs)		
25' Transportable Port Security Boat	7	
175hp Outboard Motor	7	
Vehicle, F350 Pickup	11	
Vehicle, F350 12-passenger Van	11	
Vehicle, F550 Stakebed	12	
PRC-117F Radio, Tri-band	6	

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 2012 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 2012 would be expected to arrive in RC inventories in FY 2013 or FY 2014.*

Nomenclature	FY 2012	FY 2013	FY 2014

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 2011 would be expected to arrive in RC inventories in FY 2012 or FY 2013. All values are costs in dollars.

Nomenclature	FY 2009	FY 2010	FY 2011

Table 4 not applicable for USCGR

Table 5

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 2012 Qty	FY 2013 Qty	FY 2014 Qty	Remarks

Service has no planned transfers or withdrawals for the years FY 2012 thru FY 2014.

FY 2008 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2008 with actual procurements and transfers. FY 2008 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 2010. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2008 Transfers (# of items)		FY 2008 Procurements ($s)		FY 2008 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual

USCGR had no planned or actual transfers or procurements of major equipment during FY 2008

Table 7

USCGR
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 2012 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution To Satisfy Major Item Equipment Requirements

Significant Major Item Shortages

NOTE: This table provides the RC highest priority (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 [1] Short	Item Cost	Total Shortage Cost	Rationale/Justification
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	Mobile Support Unit #2
3	Truck, 2S3 Series	2	2	$210,000	$420,000	Mobile Support Unit
4	Truck, F750	2	2	$95,000	$170,000	Mobile Support Unit
5	Truck, F450	4	4	$60,000	$240,000	Mobile Support Unit
6	Computer, Laptop	2	2	$4,000	$8,000	Mobile Support Unit
7	Trailer, (ET & EM)	4	2	$180,000	$360,000	Mobile Support Unit
8	Trailer, Parts	2	1	$150,000	$150,000	Mobile Support Unit
9	Trailer, Parts	5	3	$140,000	$420,000	Mobile Support Unit
10	Parts, WPB (MSU1)	1	1	$500,000	$500,000	Mobile Support Unit
11	Forklift, Hyster	3	1	$85,000	$85,000	Mobile Support Unit
12	Light Tower	2	2	$16,000	$32,000	Mobile Support Unit
13	Tents, GP	4	4	$7,000	$28,000	Mobile Support Unit
14	Trailers, Tools / equipment	1	1	$150,000	$150,000	Mobile Support Unit
15	Generator (MSU1)	2	2	$95,000	$190,000	Mobile Support Unit
16	Generator, Diesel	4	4	$15,000	$60,000	Mobile Support Unit
17	Vehicle, Utility	2	2	$18,000	$36,000	Mobile Support Unit
18	Trailer, 28' Kitchen	2	2	$200,000	$400,000	Mobile Support Unit

1. Shortage items are required for AC recapitalization of outdated equipment. The AC manages all equipment for the Coast Guard Total Force.

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 United States Code (U.S.C.) 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 Active Component (AC) and Reserve Component (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 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 National Guard 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 Section 10541, Title 10, U.S.C. 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 2012 to 2014 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 2012–FY 2014

  - remaining shortfall for FY 2015 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 2008 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 for the Army; Table of Authorized Materiel Control Number for the Marine Corps; Equipment Cost Code for Navy engineering items; and National Stock Number for the Air Force.

Cost is the FY 2012 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 2012, 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 2011.

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 2008 Planned vs Actual Procurements and Transfers. This table compares what the Service planned to procure and transfer to the RC in FY 2008 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 2010.

Planned Quantity is the item quantity the Service programmed to deliver to the RC as part of the budgeting process.

<u>Actual Quantity</u> 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.

<u>Nomenclature (Required Item/Substitute Item)</u>, see *Table 1* description for nomenclature. <u>Equipment Number (Required Item/Substitute Item)</u>, 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 2012–2016 Future Years Defense Program (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 Equipment Reports

The *FY 2008 National Defense Authorization Act (NDAA)*, Sections 351(a), 351(c)(1), and 1826, added new reporting requirements for the status of National Guard (NG) equipment. This appendix provides the National Guard Bureau (NGB) response to each of the requirements of the NDAA.

A. 2008 NDAA, Sections 351(a) and 351(c)(1), "Reports on National Guard Readiness for Emergencies and Major Disasters," requires an assessment of the extent to which the National Guard possesses the equipment required to support operations in an emergency or major disaster.

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 special government off-the-shelf (GOTS) or commercial off-the-shelf (COTS) equipment acquired via a variety of DoD sources to meet unique tasks, conditions, or standards for operating in the homeland. The latter are planned for and integrated by the NGB Joint Staff, but purchased by the Army National Guard (ARNG) and Air National Guard (ANG).

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 response forces, wherever possible, using existing Army or Air Guard units; either individually or in combination.

DoD plans to establish 10 National Guard-sourced Homeland Response Forces (HRFs). Regionally oriented, each of the 10 HRFs will be hosted in each of the Federal Emergency Management Agency (FEMA) regions. HRFs will increase the focus of DoD Chemical, Biological, Radiological, Nuclear, and High-yield Explosives (CBRNE) Consequence Management Response forces on lifesaving objectives and increase operational flexibility, while recognizing the primary role that the governors play in controlling the response to CBRNE incidents that occur in their states. HRFs will primarily be equipped to deploy via ground transport to CBRNE incident sites, but can be moved by air, if necessary. The core of each HRF is CBRNE capability similar to that found in the existing 17 CBRNE Enhanced Response Force Packages (CERFPs); however, HRFs will also have substantial command and control and security capabilities. The first 2 HRFs (Ohio and Washington) are expected to be in place no later than the end of FY 2011 with the remaining 8 HRFs (Massachusetts, New York, Pennsylvania, Georgia, Texas, Missouri, Utah, and California) expected to be in place no later than FY 2012.

Response forces are equipped first with dual-use equipment, and then augmented, as necessary, with the special GOTS/COTS. Dedicated Weapons of Mass Destruction Civil Support Team (WMD-CST) units are the notable exception to this unit approach.

The National Guard WMD-CSTs were established in 1999, with the initial 10 WMD-CSTs certified to Congress in August 2001. There are currently 57 such teams, missioned to respond at the direction of the governor to known or suspected, intentional or unintentional chemical, biological, radiological, nuclear (CBRN) events or catastrophic natural or manmade disasters, where significant risk to lives or property exists. The WMD-CSTs identify CBRN agents/substances, assess current and projected consequences, advise on response measures, and assist with requests for additional support. The WMD-CSTs have deployed in response to dozens of known or suspected CBRN incidents or catastrophic events, including 9-11 deployments to both the World Trade Centers and the Pennsylvania crash site, the Space Shuttle "Columbia" disaster, Hurricane Katrina, and many more in the 9 years that they have been operational. WMD-CSTs performed 70 response and 211 standby missions in FY 2008; these numbers continue to steadily increase over the years. Response missions are defined as WMD-CST deployment in response to a validated request for support by local, state, or federal agencies. Standby missions are WMD-CST deployments to provide WMD-CST personnel and equipment expertise prior to or during a high profile event. Standby missions include operations to clear venues for CBRN including site characterization and screening for CBRN materials in support of the incident commander or lead agency. WMD-CSTs are in continuous use to ensure safety of Americans at major events throughout the country, and stand ready to deploy within 90 minutes of notification.

Through the 3rd quarter FY 2010, the 55 WMD-CSTs have conducted 67 Response, 200 Standby, and 196 Assist missions and 341 training exercises. Of significant note is NGB's support to the Democratic and Republican National Conventions, the Presidential Inauguration, Pentagon 9/11 Memorial Dedication, and coordination of the first ever Civil Support Team (CST) support plan with Northern Command (NORTHCOM) that provided a designated WMD-CST from California prepositioned and on standby in Washington State to deploy other DoD forces as the lead element for cross border operations in response to an incident at the 2010 Vancouver Winter Olympic Games. Two new CSTs (second CST in NY and FL) are completing the final phases of training in preparation to request SecDef certification to Congress. Upon certification approval, NGB will have a total of 57 WMD-CSTs to support the Nation. WMD-CSTs are in continuous use to ensure the safety of Americans at major events throughout the country, and stand ready to deploy within 90 minutes of notification to complement and enhance (not duplicate) state CBRNE response capabilities.

The NGB is committed to the fundamental principle that every state and territory must have access to 10 core capabilities to respond to emergencies and major disasters in the United States. These National Guard "Essential 10" capabilities are: command and control, CBRNE consequence management, engineering assets, communications, transportation (surface), aviation/airlift, medical, security, logistics, and maintenance.

The National Guard Reaction Force has established non-lethal capabilities to assist civilian authorities with defense support of civil authorities (DSCA) missions. Each state's Adjutant General, in conjunction with the state's Governor and Attorney General, must ultimately determine if state National Guard forces will utilize non-lethal capabilities during domestic operations. Non-lethal capabilities are employed with the intent to compel or deter adversaries by acting on human capabilities or materiel while minimizing fatalities and damage to equipment or facilities. Non-lethal capabilities are intended to have reversible effects on personnel and

materiel to provide commanders with flexible options, both in time and range, to diverse and challenging threats National Guard forces face.

2. Army National Guard Equipment

a. ARNG Equipment Shortfalls

The ARNG is fielding an unprecedented amount of equipment from funding received in FY 2006–FY 2009. However, the ARNG still lacks funding necessary for critical dual use (CDU) items. Figure B-1 provides the ARNG's FY 2012 Top 25 Modernization and Capability Shortfall List of which 17 systems are considered CDU items and are filled to less than 80 percent. The most notable items on the list are in communications, command and control, transportation, and aviation "Essential 10" capabilities. *Table 8 Significant Major Item Shortages* in the ARNG section of the Army chapter of this report provide a top ten prioritized shortage list of major items of equipment required for wartime missions, which are currently not funded in the Future Years Defense Program (FYDP). Units must be prepared for homeland defense (HD)/DSCA missions regardless of what phase they are in within the Army Force Generation (ARFORGEN) model. The Army Equipping Strategy is to fill each of the approved 336 CDU equipment line item numbers to at least 80 percent.

1. Army Battle Command System (ABCS)
2. Air & Missile Defense Systems (Avenger Modernization)
3. ATLAS (All Terrain Lifter-Army System I and II)
4. Aviation Ground Support Equipment
5. Aviation Systems (CH 47F, UH60 A-A-L Mod, UH-60M, AH64 A-D MOD, LUH-72 MEP)
6. Chemical Systems (Chemical Detection & Decontamination equipment)
7. Domestic Operations Equipment [Civil Support Team (CST) equipment, CBRNE response]
8. Field Feeding Systems (MTRCS)
9. FMTV
10. Global Broadcast System
11. HMMWV Recapitalization
12. Horizontal Construction Equipment (Heavy Scraper, Graders, HMEE, Roller, Light Loaders, Asphalt Equipment)
13. Medical Systems (MC4, MES)
14. Military Intelligence Systems (Prophet, TROJAN Spirit, DCGS-A)
15. Radars (LCMR, EQ-36)
16. Route & Area Clearance (RG-33, HUSKY, BUFFALO)
17. Tactical Bridging
18. Tactical Power Generation
19. Tactical Radios
20. Tactical Trailers
21. Tactical Water Systems (HIPPO, CAMEL)
22. Test, Measurement, and Diagnostic Equipment (TMDE) (Maintenance Support Device)
23. Training Devices (MRAP VVT, Armor VVT, ABCS, Shadow Crew, Virtual Convoy Trainers, Weapons Trainers)
24. Unmanned Aerial Systems (TUAS-Shadow, SUAS-Raven RQ-11)
25. Ultra Light Utility Vehicles (ULUV)

BLACK = Carryover
GREEN = Add

*LIST IS NOT PRIORITIZED
Items Listed Alphabetically*

Raymond W. Carpenter
Major General, GS
Acting Director, Army National Guard

Figure B-1. FY 2012 ARNG Top 25 Equipment Modernization and Capability Shortfall List

The most notable shortfall items on ARNG's *Table 8* are in aviation modernization; command, control, and communications; and transportation.

i. Aviation Modernization

Aviation modernization shortfalls include the UH-60 Blackhawk (60 percent filled), the LUH-72 Lakota (61 percent filled), the AH-64 Apache (75 percent filled), and the CH-47D Chinook (9 percent filled). The ARNG's investment strategies for rotary aviation are ongoing technical refreshment recapitalization programs Army-wide for the UH-60 Blackhawk and AH-64 Apaches. The LUH-72 Mission Enhancement Program is specific to the ARNG. The ARNG is utilizing NGREA funds for this initiative.

ii. Command, Control, and Communications

Command, control, and communication shortages include Standardized Integrated Command Post Systems (SICPS) (89 percent filled) and the Force XXI Battle Command Brigade and Below (FBCB2) (44 percent filled).

The Army decided not to invest in SICPS to Echelons-Above-Brigade structure, even though SICPS are considered critical equipment. Consequently, the ARNG's investment strategy is to invest $235M in NGREA funds to fund SICPS fully. These SICPS will be delivered over the next two years.

iii. Transportation

Transportation shortfalls include Medium Tactical Vehicles (87 percent filled), Tactical Trailers (77 percent filled), Liquid Logistics systems (69 percent filled), HMMWV ambulances (75 percent filled), and armor-capable Light Tactical Vehicles (28 percent filled).

ARNG investment strategies to improve this category are improved programmed funding in the budget process and utilizing NGREA funds on transportation procurement contracts.

b. Effects of ARNG Shortfalls

ARNG equipment shortfalls impact our ability to be fully interoperable with the Active Component (AC). Equipment shortfalls mean continued use of legacy systems and missed opportunities to train on equipment that is used for overseas contingency operations (OCO) missions. For example, our transportation shortfalls mean the ARNG is still using a medium tactical fleet that is on average over 20 years old.

Modernized, available equipment means a ready, capable ARNG, prepared for HD/DSCA and OCO.

c. ARNG Investment Strategies

The ARNG has successfully used NGREA and Congressional additions to significantly mitigate key ARNG shortfalls. The ARNG has historically used the majority of its NGREA funding on the three "Essential 10" capabilities: transportation (48 percent), aviation (15 percent), and signal (15 percent). The ARNG is working with Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA [ALT]) to obligate NGREA funds faster. The ARNG and ASA (ALT)'s goal is to identify headspace on key procurement contracts so NGREA funds can be obligated at the same rate as programmed funds. The NGREA investment strategy has successfully used this funding to purchase CDU items and other equipment for HD/DSCA

missions. Notable NGREA success stories for the Family of Medium Tactical Vehicles (FMTV), HMMWV ambulances, and SICPS are highlighted in Chapter 2.

Other shortfall mitigation strategies include cross-leveling, theater-provided equipment, improved transparency, and improved life cycle management. Instances of cross-leveling still occur, but they are not as prevalent now that the ARNG is fielding much more equipment. Improved transparency will result in more accurate accounting of equipment delivered; the ARFORGEN Cycle—Reset Phase, will improve the life cycle management of equipment.

3. Air National Guard Equipment

ANG equipment is typically procured in support of federal missions with authorizations that are aligned to Tables of Allowances (TAs), which prescribe the equipment necessary to perform federal missions. These authorizations are filled using a priority system that considers the operational priority and first to fight logic to execute acquisition decisions, and as a rule, ANG and AC units are equitably treated when setting equipment distribution priorities. While some equipment items are acquired using COTS contracts, and are used to support both federal and DSCA missions, the vast majority is acquired utilizing Service-unique and DoD logistics activities and systems.

The preponderance of equipment in the ANG can be used to support DSCA operations and federal requirements and is classified as "dual use." Current equipment tracking methods show that even though there has been a reduction in authorized equipment due to mission changes and associations, approximately 88 percent of all the authorized ANG equipment (647,449 pieces) has a valid use in either a federal mission or DSCA operation. The Total Force relationship between the Air Force (AF) and the ANG has resulted in excellent support for these dual-use items. Currently, the ANG has 92 percent (595,324 pieces) of all authorized dual-use items on-hand within the Essential 10 categories. The 92 percent equipment availability rate is comparable to the overall AF availability rate (see Table B-1).

CABABILITY	AUTH QTY	INUSE QTY	FILL RATE	AUTH COST	INUSE COST	NEEDED QTY	NEEDED COST
September 2010							
Aviation SE	70,227	64,016	91%	$4,404,777,209	$3,722,899,173	6,211	$681,878,036
Civil Support & Force Protection	2,788	2,581	93%	$906,436,715	$839,136,715	207	$67,300,000
Command & Control	13,165	12,824	97%	$675,373,889	$622,046,458	341	$53,327,431
Communication	7,159	7,005	98%	$46,772,601	$29,005,064	154	$17,767,537
Engineering	34,766	30,413	87%	$215,613,513	$169,744,179	4,353	$45,869,334
Logistics	100,774	79,886	79%	$98,493,776	$65,207,028	20,888	$33,286,748
Maintenance	125,587	117,154	93%	$2,427,219,497	$1,980,303,784	8,433	$446,915,713
Medical	209,393	209,282	100%	$3,777,216	$2,875,352	111	$901,864
Security	67,583	57,882	86%	$125,775,442	$104,204,306	9,701	$21,571,136
TOTAL SE	**631,442**	**581,043**	**92%**	**$8,904,239,858**	**$7,535,422,059**	**50,399**	**$1,368,817,799**
VEHICLES	16,007	14,281	89%	$643,955,373	$668,336,863	1,726	$69,436,308
TOTAL SE & VEHICLES	**647,449**	**595,324**	**92%**	**$9,548,195,231**	**$8,203,758,922**	**52,125**	**$1,438,254,107**

Table B-1. ANG Support Equipment (SE) and Vehicles

The ANG also benefits from the Air Force's general guidelines to use mostly AC equipment in support of OCO. Currently, only 1.4 percent of ANG equipment is deployed in support of OCO. Another 0.7 percent of ANG equipment is deployed throughout the 54 states and territories in support of DSCA operations.

a. ANG Equipment Shortfalls

Despite the overall excellent equipment support provided by the Air Force, the ANG still has shortfalls in critical DSCA areas. Aggravating these critical shortfalls, the advancing age of some ANG equipment could result in a barrier to meeting ANG DSCA responsibilities. A more detailed review of the ANG equipment health is described in four of the Essential 10 categories.

i. Logistics

The overall ANG logistics status is good at 79 percent. However, the limited domestic availability of Body Armor Personal Protective Equipment (15,396 items) is driving the metric down. The Air Force is in the process of procuring much of these to fill Air Force and ANG worldwide requirements, as well as pre-positioning these items at locations in the area of operations for deploying personnel. The ANG is very sensitive to this shortage. While the Air Force always ensures Guardsmen have body armor when deploying to support OCO, the ANG "fight in place" DSCA operations mission dictates that body armor be available constantly for a majority of our Airmen.

ii. Engineering

The overall engineering status is excellent at 86 percent. However, prime power, route clearance, safety and rescue, and firefighting equipment shortages are inhibiting the ANG's ability to concurrently perform home station or OCO and DSCA missions. For example, prime power requires in excess of $12M in power generation capability that will be used to provide stable, reliable electrical power in deployed environments either abroad or during DSCA operations. During DSCA operations, this power would be a life saving capability for the affected community. The equipment will be capable of increasing and maintaining emergency power for an extended period to a hospital center, providing power to the entire facility. Additionally, the prime power makes possible the open the base capability, either expeditionary or contingency, for the ANG. Currently, insufficient capacity exists in the 10 FEMA regions. The ANG is taking all steps possible to acquire prime power capability to ensure safe, reliable, and effective power is available for federal and DSCA missions when required.

iii. Transportation

Vehicle on-hand status is excellent at 89 percent. However, 33 percent, or approximately 4,700, ANG vehicles, have exceeded or will soon meet the end of their useful economical life. Included in these aging vehicles are 453 aircraft maintenance vehicles, refuelers, firefighting, heavy maintenance, and snow removal vehicles with a replacement cost of over $160M. Such legacy vehicles tend to have frequent maintenance failures and are costly to maintain, further encumbering our already-stressed vehicle maintenance personnel. Ironically, such general support vehicles are those most in demand for DSCA operations, so the aging vehicle fleet could actually negatively impact DSCA missions before affecting ANG federal missions. Existing and future funding plans only cover 12.3 percent of the total ANG requirements, which means the age of these vehicles used in Domestic and Title 10 responses will continue to age without replacements, causing a greater draw on scarce resources. Currently, no ANG vehicles are deployed in support of federal missions. Lastly, despite vehicle funding constraints, the ANG continues to aggressively pursue the Presidential Directive to reduce energy use by 30 percent through acquisition of low speed vehicles (LSV) and vehicles that use alternative fuels.

iv. Security

The overall security status is excellent at 87 percent. Currently, small arms, night vision devices, and all terrain LSV shortages are limiting the ANG security forces' ability to concurrently provide the public safety and security at home station or OCO and during DSCA missions. However, these shortages have previously been identified and requirements are being filled through central Air Force procurement processes or are being filled through other funding sources.

v. Communications

The overall communication status is excellent at 98 percent. However, this status does not consider the many essential systems that are operating in a degraded state or have exceeded their economical useful life. Aggravating this concern is the immediate need of modernization or acquisition of this aging equipment and to combat electronic intrusions or denials of service to ANG communication infrastructure. Additionally, due to DSCA and federal mission requirements, the ANG has a greater need for increased interoperable, National Incident Management System (NIMS)-compliant communication. Competing priorities have relegated these important communications systems to lower status, potentially impacting support to state and federal command authorities/centers.

The ability to communicate with military, law enforcement, and civilian frequencies over multiple frequency bands and with an adequate amount of power is essential to DSCA and federal mission accomplishment. Air Support Operations Squadrons (ASOS) rely on legacy systems that do not offer the reliability, sustainability, scalability, and rapid deployment for use in DSCA or federal missions. Packaging multi-band tactical radios and high frequency tactical radios will allow ASOS to communicate with all disaster response agencies through line-of-sight and over-the-horizon voice communications, and digital tactical satellite communications.

Although, ANG Intelligence, Surveillance, and Reconnaissance (ISR) units have highly trained and experienced imagery analysts at units located in each of the FEMA regions, only one unit is capable of processing imagery at the unclassified level, effectively inhibiting a more robust and valuable ANG resource from supporting DSCA operations. Installing unclassified Processing, Analysis, and Dissemination suites will allow unit personnel at home station to provide direct imagery analysis support to first responders. Additionally, the ANG currently lacks Wideband Intelligence Dissemination System–Broadcast Request Imagery Technology (WIDS-BRITE) capability. WIDS-BRITE will enable ANG units to easily request and receive imagery in near-real-time from DoD and civilian agency data repositories to aid DSCA responders, push locally-derived imagery products and data to the NORTHCOM DSCA Incident Awareness and Assessment infrastructure and NIMS, and monitor real-time imagery feeds broadcast over Global Broadcasting System.

ANG Wing Command Posts (WCPs) are required to establish and maintain a responsive and reliable communications system linking the WCP with the National Military Command Center, Air Force Space Warfare Center, ANG Command Center, Major Commands, combatant commands, and applicable State Joint Operations Centers during routine operations, emergencies, contingencies, and/or increased readiness. ANG Wing Operation Center command consoles also support emergency management, reporting, and the monitoring of critical missions, such as NORTHCOM Air Sovereignty Alert, Nuclear Enterprise, etc. Today, these consoles either do not exist at the wings or are antiquated, and will not interface with modern systems. To mitigate this

risk, over $50M in upgrades will be needed to 88 ANG command consoles and radios. These upgrades will enable real-time or near real-time collaboration regardless of location with emergency preparedness personnel.

b. Effects of ANG Shortfalls

Shortfalls in equipment could prevent or delay an ANG response to natural or manmade disasters in the homeland, or impair the ANG's ability to perform as an integral part of the Total Air Force. Improved availability of equipment strengthens readiness for the ANG to defend not only U.S. interests abroad, but also assures the safety and security of the 54 states, territories, and the District of Columbia. Additionally, the added equipment helps guarantee improved capability to train on mission-essential equipment used in both federal and DSCA missions.

c. ANG Requirements and Acquisition Strategies

Basic ANG requirements are determined through a Total Force process to determine standard support equipment required for federal missions. Variants are then made based on the unique missions and conditions of our ANG units. Once valid requirements have been established, those requirements are filled based on the mission priority of the unit and weapon system. The ANG staff then uses all available funding sources to fill equipment requirements. Most funding results from the annual DoD planning, programming, budgeting, and execution process, with other funding coming from AF central agencies for support items that are fungible across the AF enterprise, such as personal protective equipment, communications equipment, and some vehicles. The ANG has also been aggressive in seeking OCO funds to replace items that have been expended in supporting that effort. Lastly, the ANG also takes full advantage of NGREA funding to procure any authorized support equipment items that can increase a unit's ability to support DSCA missions.

4. Specialized Equipment

Specialized equipment is that unique equipment that is specific to the DSCA mission and is not considered dual-use. Funding, management, and accounting procedures may differ from the procedures used to manage equipment authorized to support federal missions. Much of this equipment is procured from COTS vendors and does not have organic sustainment support.

a. Specialized Equipment Shortfalls

The WMD-CSTs continue to have a limiting factor of non-redundant commercial CBRN equipment for monitoring, detection, and analysis of field incidents. Some critical COTS equipment is fielded to the CSTs without spares, such as generators, and specialized vehicles. The result is a likely single point of failure for a CST mission, lessening the team's capability until replacements are obtained or suitable substitutes are repositioned from other WMD-CST units.

Ongoing analysis indicates CERFPs require an organic reach-back communications capability (NORTHCOM communications standard level 2 platform) for patient tracking and situational awareness with the Joint Task Force State and the Joint Force Headquarters State Joint Operations Center.

In addition, CERFPs still have a potential limiting factor in the dual-use Small Portable Expeditionary Aero medical Rapid Response (SPEARR) gear associated with the medical element. The Air Force allowance standards in the Defense Medical Logistics Standard Support system are

regularly adjusted to changes in quality controls, safety recalls, obsolescence, or lack of continued manufacturer support. While the SPEARR mission has not changed, the equipment has been significantly modernized to better fit the mission. Furthermore, there are an additional 10 SPEARR team/packages required through the introduction of 10 HRFs by FY 2012, giving the ANG a requirement for the total of 27 SPEARR team/packages across the U.S. and its territories.

b. Effects of Shortfalls of Specialized Equipment

The CST and SPEARR issues are limiting factors, with no specific effects unless equipment failure occurs.

Because the 17 CERFPs lack an organic reach-back capability and an interoperable, handheld communications platform in their equipment complement, they will remain dependent on external sources for communications to maintain contact with higher headquarters and to interoperate with other first responders until the procurement referenced above is completed.

NGB has purchased equipment according to the SPEARR allowance standards for the 17 CERFPs. The CERFP medical assemblages have been modified significantly to better meet the CBRNE enterprise homeland response mission. The 10 new HRF/CERFP units coming on board in FY 2011 and FY 2012 will have the new modernized medical assemblages. The current 17 CERFP units will require the upgraded equipment assemblages to be current with the new standard. However, the ANG maintains nine Block 11 Expeditionary Medical Support (EMEDS) +25 and +10 medical treatment platforms, while the Air Force upgraded to the new Block 12 EMEDS during FY 2010. During this time, the ANG received $3.2M in NGREA FY 2009 funds to upgrade the Block 11 EMEDS to Block 12. Unfortunately, a $4M shortfall prevented all EMEDS medical assemblages from receiving upgrades. Another $3M shortfall exists in procurement of initial oxygen and water distribution systems, critical to sustained DSCA medical operations. These shortfalls create a lack of standardization between units, which is critical during execution of DSCA operations.

c. Requirements and Acquisition Strategies for Specialized Equipment

Specialized GOTS/COTS equipment for emergencies or response to a major disaster is funded using a combination of Army, ARNG, Air Force, and ANG appropriations, along with DoD-wide appropriations, e.g., the Chemical and Biological Defense Program (CBDP) funds as well as ANG and ARNG NGREA. The NGB continues to work with DoD to pursue modernization for equipment used by CSTs as technology evolves. The CBDP has programmed increases starting in FY 2010 for research, development, test, and evaluation (RDT&E); procurement; and life-cycle management for CST equipment, although significant unfunded requirements remain. One objective for this CBDP will be to mitigate or eliminate the single failure points in CBDP equipment mentioned above.

B. 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, National Guard Bureau setting forth the inventory of equipment items that were due to be procured for the National Guard in the preceding fiscal year, but were not received.

1. Chief, National Guard Bureau (CNGB) Statement

At the present time, the Service components are unable to completely satisfy either of the reporting requirements prescribed in Section 1826 of the FY 2008 NDAA due to a general lack of transparency within portions of the Army and Air Force equipment procurement and distribution processes. While both Services have made significant improvements to these processes and their supporting automation systems in recent years, we still cannot reliably tie a piece of delivered equipment back to its funding source. Because of the multi-year nature of the procurement process, this precludes the NGB from adequately determining how much of the funding provided by Congress for National Guard equipment has been executed and how much is still to be executed. Ultimately, this makes it impossible to precisely determine if these funds are resulting in timely equipment deliveries to National Guard units.

To provide the level of transparency and accountability the CNGB needs to certify future NDAA, Section 1826 reports, Army and Air Force procurement processes must be modified to allow the NGB staff to track funds and equipment from appropriations, through execution, to equipment delivery. Only then can we monitor the execution status of individual funding sources and provide the level of detail called for in the NDAA. The Office of the Secretary of Defense (OSD) and the Services are developing process and automation system solutions that will provide this level of transparency and accountability. However, even if these solutions are implemented immediately, it will still take two years or more to gain complete accountability due to the large quantity of funding and equipment currently in the procurement and distribution pipeline. This being the case, the Services would still need to conduct an extensive audit to determine if past deliveries, and those planned for FY 2010, FY 2011, and FY 2012 are commensurate with funding provided in past fiscal years.

2. Army National Guard

Over the past year, the Army has significantly improved and expanded transparency efforts within its equipment procurement and distribution processes. The Army is leveraging a Financial Synchronization and Transparency Integrated Product Team (IPT), a Delivery Certification IPT, and a Transparency General Officer Steering Committee to manage this effort. As of the 3rd quarter FY 2010, the Army was collecting transparency data for 85 systems. These 85 major systems were selected based on their importance to the ARNG and Army Reserve. While this represents a significant increase from 30 systems that were initially identified in FY 2009, the plan is to collect transparency data on all major procurement systems beginning in FY 2011. As of the 3rd quarter FY 2010, ARNG funding for the 85 systems included in data collection totals approximately $4.25B in FY 2009 and $3.19B in FY 2010.

As part of its expanded transparency efforts in FY 2010, the Army implemented a policy to improve the Congressional Budget Justification documents for component funding allocations (P-1R and P-40s) and stood-up a series of IPTs to develop enduring business rules using Lean

Six Sigma approaches. The Army expects to gain efficiencies by automating the data collection process and using the data to enhance decision-making across the Headquarters Staff.

Despite the significant progress, the ARNG will still remain unable to assess delivered quantities against those that were due in, as specified in the NDAA reporting requirement until all major procurement systems are included in transparency data collection.

3. Air National Guard

To meet the equipment transparency requirements in NDAA 2008 and the Committee on National Guard and Reserves (CNGR) recommendations, the Deputy Assistant Secretary of the Air Force for Acquisition Integration (SAF/AQX) is developing new guidelines for development of the Reserve Component President's Budget exhibits. Additionally, the Expeditionary Combat Support System (ECSS), in concert with Item Unique Identification (IUID), is designed to improve warfighter capability by transforming Air Force logistics business processes and leveraging ongoing initiatives and capabilities that information technology can deliver. These initiatives will combine with other Expeditionary Logistics for the 21st Century initiatives to provide a single data source for equipment from source of supply to the use of the equipment at the unit level. ECSS is projected to help make possible the statement of accuracy of the projections required by subsection (b) (5) (D) in earlier reports under this section. ECSS links with Air Force funding systems and will better allow all Air Force Components to trace equipment expenditures from procurement to delivery. ECSS is the Air Force's system that will provide the required solution for the ANG. The first phase of ECSS was fielded at AF test bases July and August 2010 and the first ANG bases will be integrated in. However, ECSS will not be fully operational until FY 2013. The IUID initiative is being implemented July and August as well, including a select number of ANG bases. This initiative will eventually tag all ANG equipment with an informational "license plate" that will allow the AF enterprise to identify and track that piece of equipment wherever it is on the globe. While these initiatives progress, ANG staff personnel will use the new SAF/AQX reports and current data systems to best track the funding, procurement, delivery, and use of ANG equipment.

Overall, the ANG has adequate dual-use equipment to meet both the federal and DSCA operations requirements. However, there are equipment shortfalls in areas that are keys to our homeland mission. Lack of communications and personal protective equipment could hamper the ANG's ability to support a worst-case natural disaster, and the rapidly aging ANG vehicle fleet of general purpose and special purpose vehicles could be a concern if funding levels do not change to match requirements. In recent years, the Services have improved their processes and automation systems to facilitate the procurement and distribution of equipment, and to some extent, the tracking of these resources throughout the processes. While it is still not possible for the CNGB to verify that all funding intended for the National Guard is resulting in the delivery of equipment to our units, the Army, along with the SAF/AQX reports, offer the first valid attempts to meet that requirement. The maturation of these reports and the fielding of the ECSS logistics system should combine to provide the transparency that is desperately needed for our equipment procurement processes.

4. Conclusion

Over the past year, the Services have greatly improved their processes to facilitate the tracking of

resources through the acquisition and distribution process. Although transparency and visibility are now much better than in years past, there is still work to be done to automate the new process and institute it into the Army and Air Force culture. The key to achieving full transparency is to continue the current level of effort and command emphasis by senior Army, Air Force, and OSD leaders, and Congress.

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Appendix D
Acronym Glossary

Acronym	Nomenclature
AAO	Approved Acquisition Objective (Marine Corps)
AAO	Army Acquisition Objective
AAV	amphibious assault vehicle
AC	Active Component(s)
ACC	Air Combat Command
ACS	Air Control Squadron
ADOS-AC	Active Duty for Operational Support of the AC
ADS	Aircraft Defensive Systems
AEA	airborne electronic attack
AEF	air and space expeditionary force
AESA	Active Electronically Scanned Array
AEW	airborne early warning
AF	Air Force
AFATDS	Advanced Field Artillery Tactical Data System
AFB	Air Force base
AFR	Air Force Reserve
AFRC	Air Force Reserve Command
AFSOC	Air Force Special Operations Command
AGSE	aviation ground support equipment
AIFF	advanced identification, friend or foe
AIP	antisurface warfare improvement program
AMARG	Aerospace Maintenance and Regeneration Group
AMC	Air Mobility Command
AMCM	airborne mine countermeasures
AME	Alternate Mission Equipment
AMP	Avionics Modernization Program
ANG	Air National Guard
AOC	Air and Space Operations Center
AOC-WS	Air and Space Operations Center - Weapon System
AOR	area of responsibility
APN	Aircraft Procurement Navy
AR	United States Army Reserve
ARB	Air Reserve Base
ARFORGEN	Army Force Generation
ARI	Automatic Reset Induction
ARNG	Army National Guard
ARS	Air Reserve Station
ASA(ALT)	Assistant Secretary of the Army for Acquisition, Logistics and Technology
ASAS	All Source Analysis System
ASOC	air support operations center
ASOG	Air Support Operations Group
ASOS	Air Support Operations Squadron
ASW	antisubmarine warfare
ATM	Air Traffic Management
ATP	advanced targeting pod
BCS3	Battle Command Sustainment Support System

Acronym	Nomenclature
BCT	brigade combat team
BDE	brigade
BLOS	beyond line of sight
BMUP	Block Modification Upgrade
BOG	Boots on the Ground
BOIP	Basis of Issue Plan
BOS	Budget Operating System
BRAC	base realignment and closure
C2	command and control
CAC2S	Common Aviation Command and Control System
CAF	combat air forces
CBDP	Chemical and Biological Defense Program
CBPS	Chemical Biological Protective Shelter
CBRN	chemical, biological, radiological, and nuclear
CBRNE	chemical, biological, radiological, nuclear, and high-yield explosives
CCMRF	CBRNE Consequence Management Response Force
CDU	critical dual use
CDU	center console display unit
CENTCOM	United States Central Command
CERFP	CBRNE Emergency Response Force Package
CESE	civil engineering support equipment
CIF	Central Issue Facility
CIF-ISM	Central Issue Facility-Installation Support Module
CLASSRON	class squadron
cNAF	Component Numbered Air Force
CNGB	Chief, National Guard Bureau
CNGR	Commission on the National Guard and Reserves
CNO	Chief of Naval Operations
CNR	Chief of Navy Reserve
CNS	Communication, Navigation, Surveillance
COCOM	combatant command
CONECT	Combat Network Communications Technology
CONUS	continental United States
COTS	commercial off–the-shelf
CPP	Command Post Platform
CRC	Control and Reporting Center
CSAR	combat search and rescue
CSS	combat service support
CST	Civil Support Team
CVTS	Combat Vehicle Training System
CVW	carrier air wing
DART	Domestic All Hazards Response Team
DCGS	Distributed Common Ground System(s)
DCGS-A	Distributed Common Ground System-Army
DCRF	Defense CBRNE Response Force
DD	Department of Defense (form)
DET	Displaced Equipment Training
DGS	Distributed Ground Station
DHS	Department of Homeland Security

Acronym	Nomenclature
DMDS	Digital Mission Data System
DMO	Distributed Mission Operations
DOC	designed operational capability
DoD	Department of Defense
DoDD	Department of Defense Directive
DOER	Domestic Operations Equipment Requirement
DOG	Deployable Operations Group
DPEM	Depot Purchased Equipment Maintenance
DRRS	Defense Readiness Reporting System
DSCA	defense support of civil authorities
DTOC	Distributed Training Operations Center
DTSS	Digital Topographic Support System
DVTE-R	Deployable Virtual Training Environment-Reserves
EA	electronic attack
ECSS	Expeditionary Combat Support System
EDR	Equipment Delivery Report
EHS	Enhanced Mode S
EMEDS	Expeditionary Medical Support
EO	electro-optical
EOD	explosive ordnance disposal
EOH	equipment on-hand
ER	extended range
EPLRS	Enhanced Position Location Reporting System
ESF	Emergency Support Function
EUL	economic useful life
EXPCOMBATCAM	Expeditionary Combat Camera
FAA	Federal Aviation Administration
FAC	forward air controller
FBCB2	Force XXI Battle Command, Brigade and Below
FEMA	Federal Emergency Management Agency
FFG	guided-missile frigate
FLE	Fatigue Life Expended
FLIR	forward-looking infrared
FMC	full mission-capable
FMT	Full Mission Trainer
FMTV	Family of Medium Tactical Vehicles
FST	Financial Synchronization and Transparency
FTC	Full Training Capability
FTS	Full-time Support
FTU	formal training unit
FY	fiscal year
FYDP	Future Years Defense Program
GA	Guardian Angel
GCSS-A	Combat Support System-Army
GCS	ground control station
GOTS	government off–the-shelf
GPS	Global Positioning System
GSAB	General Support Aviation Battalions

Acronym	Nomenclature
HA/DR	humanitarian assistance/disaster relief
HD	homeland defense
HEMTT	heavy expanded mobility tactical truck
HIMARS	High Mobility Artillery Rocket System
HMIT	Helmet-mounted Integrated Targeting System
HMMWV	high mobility multipurpose wheeled vehicle
HQ	headquarters
HQDA	Headquarters, Department of the Army
HRF	Homeland Response Force
HS	homeland security
HTV	Heavy Tactical Vehicle
IAA	incident awareness and assessment
IAN/VSD	Integrated Approach Navigation/Vertical Situation Display
IAP	International Airport
IEW	intelligence and electronic warfare
I-FACT	Indirect Fire Forward Air Control Trainer
IMATE	Integrated Multiple Antenna Terminal Electronics
IPT	Integrated Product Team
IR	infrared
IRCM	infrared countermeasures
ISR	intelligence, surveillance, and reconnaissance
ISYSCON	Integrated System Control
IUID	Item Unique Identification
IWB	Internal Weapons-Bay
JATO	jet-assisted takeoff
JCAD	Joint Chemical Agent Detector
JDAM	Joint Direct Attack Munition
JICC	Joint Interface Control Cell
JLTV	Joint Light Tactical Vehicle
JRB	Joint Reserve Base
JSF	Joint Strike Fighter
JSTARS	Joint Surveillance Target Attack Radar System
LAIRCM	Large Aircraft Infrared Countermeasures
LAR	Light Armored Reconnaissance
LARS	Lightweight Airborne Recovery System
LAV	light armored vehicle
lb	pound
LD/HD	low-density/high-demand
LIN	Line Item Number
LMTV	Light Medium Tactical Vehicle
LSV	low speed vehicles
LTV	Light Tactical Vehicle
LVS	Logistics Vehicle System
LVSR	Logistics Vehicle System Replacement
MACCS	Marine air command and control system

Acronym	Nomenclature
MAF	mobility air forces
MAGTF	Marine air-ground task force
MARFORRES	Marine Forces Reserve
MASS	Modular Aerial Spray System
MATV	MRAP All Terrain Vehicle
MAW	Marine aircraft wing
MCA	Maritime Civil Affairs
MCAST	Maritime Civil Affairs and Security Training (Command)
MCR	Marine Corps Reserve
MEDEVAC	medical evacuation
MEEL	Mission Essential Equipment List
MESF	maritime expeditionary security force
METL	mission-essential task list
MFGI	Mobilization Force Generation Installations
MHE	materials handling equipment
MIE	Major Items of Equipment
MOTR	Maritime Operational Threat Response
MPRA	maritime patrol and reconnaissance aircraft
MRAP	Mine Resistant Ambush Protected
MSRON	maritime expeditionary security squadron
MSRT	maritime security response team
MSST	maritime safety and security team
MSU	mobile support unit
MTOE	modified table of organization and equipment
MTT	Multi-task Trainer
MTV	Medium Tactical Vehicle
MTVR-ODS	MTV Replacement-Operator Driving Simulator
MWS	Missle Warning System
NAS	Naval Air Station
NATO	North Atlantic Treaty Organization
NAVELSG	Navy Expeditionary Logistics Support Group
NBC	nuclear, biological, and chemical
NCC	Navy component command
NCF	naval construction force
NCHB	Navy cargo handling battalion
NCR	naval construction regiment
NDAA	National Defense Authorization Act
NECC	Navy Expeditionary Combat Command
NEIC	Navy Expeditionary Intelligence Command
NELR	Navy expeditionary logistics regiment
NET	New Equipment Training
NGB	National Guard Bureau
NGREA	National Guard and Reserve Equipment Appropriation
NGRER	National Guard and Reserve Equipment Report
NGSCA	National Guard Support of Civil Authorities
NIMS	National Incident Management System
NMCB	naval mobile construction battalion
NMS	National Military Strategy
NORTHCOM	United States Northern Command
NSW	naval special warfare

Acronym	Nomenclature
NSWG	naval special warfare group
NUFEA	Navy-unique fleet essential airlift
NVIS	Night Vision Imaging System
OBIGGS	Onboard Inert Gas-Generating System
OC-ALC	Oklahoma City - Air Logistics Center
OCIE	Organizational Clothing and Individual Equipment
OCO	overseas contingency operations
OCONUS	outside the continental United States
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OND	Operation New Dawn
OPLAN	operation plan
OPN	Other Procurement, Navy
OPNAV	Chief of Naval Operations
OSA	operational support airlift
OSD	Office of the Secretary of Defense
OSU	operational support unit
PARP	Post-Appropriation Reconciliation Process
PDM	Program Depot Maintenance
PDTE	Pre-deployment Training Equipment
PE	Precision Engagement
PE	program element
PLS	palletized load system
POM	program objective memorandum
PPE	personal protective equipment
PRESBUD	President's Budget
PSU	port security unit
QDR	Quadrennial Defense Review
RAID	Redeployment Assistance and Inspection Detachment
RAMMP	Reliability and Maintainability Maturation Program
RC	Reserve Component(s)
RDT&E	research, development, test, and evaluation
RERP	Reliability Enhancement and Re-engining Program
RFF	request for forces
RFI	Rapid Fielding Initiative
RFRS	Reserve Force Readiness System
RFT	Ready for Tasking
RPA	remotely piloted aircraft
RSMS	Readiness Sustainment Maintenance Site(s)
RSS	readiness support site
RTC	Reserve Training Center
RTIC	Real Time Information in Cockpit
RVSM	Reduced Vertical Separation Minimum
RWR	radar warning receiver
SADL	situational awareness data link
SAF/AQX	Deputy Assistant Secretary of the Air Force for Acquisition Integration

Acronym	Nomenclature
SAFIRE	Surface-to-air Fire
SAM	surface-to-air missile
SATCOM	satellite communications
SecDef	Secretary of Defense
SEAL	sea-air-land
SELRES	Selected Reserve
SE	support equipment
SF	Security Forces
SICPS	Standardized Integrated Command Post System
SINCGARS	single-channel ground and airborne radio system
SIPRNET	Secret Internet Protocol Router Network
SLEP	service life extension program
SLOS	secure line-of-sight
SMART-T	Secure Mobile Anti-Jam Reliable Tactical Terminal
SMCR	Selected Marine Corps Reserve
SOC	Squadron Operations Center
SOUTHCOM	United States Southern Command
SPEARR	Small Portable Expeditionary Aeromedical Rapid Response
STAMIS	Standard Army Management Information System(s)
SWE	Surface Warfare Enterprise
T/A	Training Allowance (Marine Corps)
TA	Table of Allowances (Air Force)
TACP	tactical air control party
TADSS	Training Aids, Devices, Simulators and Simulations
TBC	Tactical Battle Command
TC-AIMS	Transportation Coordinators Automated Information Management System
TDA	Table of Distribution and Allowances
TDL	tactical data link
TO&E	table of organization and equipment
TOA	table of allowance
TPE	theater-provided equipment
TPSB	transportable port security boat
Trojan SPIRIT	Special Purpose Intelligence Remote Integrated Terminal
TSW	Tactical Support Wing
TWV	Tactical Wheeled Vehicle
U.S.	United States
U.S.C.	United States Code
UAV	unmanned aerial vehicle
UE	unit equipped
USAR	United States Army Reserve
USCGC	United States Coast Guard Cutter
USCGR	United States Coast Guard Reserve
USMC	United States Marine Corps
USMCR	United States Marine Corps Reserve
VCC+	VHSIC CC Plus
VCCT-M	Virtual Combat Convoy Trainer-Marine
VCS	vehicle communications system
VECTS	Virtual Electronics Combat Training System

Acronym	Nomenclature
VHSIC CC	Very High Speed Integrated Circuit Central Computer
VIP	very important person
WCMD	Wind Corrected Munitions Dispenser
WCP	Wing Command Post
WIDS-BRITE	Wideband Intelligence Dissemination System-Broadcast Request Imagery Technology
WIN-T	Warfighter Information Network-Tactical
WMD	weapons of mass destruction
WMD-CST	WMD Civil Support Team
WRMS	war reserve materiel stock
WSS	Weapon Systems Sustainment
WST	Weapon Systems Trainer

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