DEPARTMENT OF DEFENSE

NATIONAL GUARD AND RESERVE EQUIPMENT REPORT FOR FISCAL YEAR 2014

March 2013

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(NGRER FY 2014)

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

March 2013

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RESERVE AFFAIRS

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FOREWORD

Our military must have access to sufficient modern equipment to provide viable defense options to our Nation's leaders.

We are still a nation at war and the Reserve Components (RCs) have demonstrated their talent and dedication time and time again. Since 2001, more than 860,000 RC personnel have been activated to fight, support operations, and provide humanitarian assistance around the world. Their mobilization efforts and exceptional performance have proved vital to successful Total Force operations in Iraq and Libya, ongoing efforts in Afghanistan, the massive relief efforts in Japan and Haiti, and many other engagements.

At home, RCs continue to provide wide-ranging, effective options for state and federal leaders, including new and exciting ways to help communities nationwide. Important new legislation now enables the Secretary of Defense to activate a wide array of units and individuals for domestic emergencies or natural disasters in response to a Governor's request for federal assistance.

The Total Force must use scarce resources efficiently, and develop the best Active/Guard/ Reserve force mix providing the greatest capability and capacity at the best value to the taxpayers. A proper AC/RC mix is critical to preserving the All-Volunteer Force.

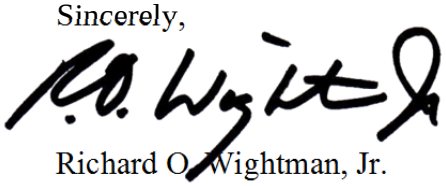
Guard and Reserve units stand ready to continue as an operational force with planned rotations and mobilizations. The RCs need the necessary resources to man, equip, sustain, and train. Modernization and recapitalization of equipment must extend to the RCs, placing particular emphasis on the cyclical needs of rotational equipment used to train for scheduled deployments.

The Department has been working on its transparency efforts for over three years to ensure the RCs get sufficient modern equipment to train at home station, deploy for contingency or crisis response, and react to domestic consequence management events. The RC equipment transparency initiative is an attempt to track funding from appropriation through the acquisition cycle, and on to a delivery into an armory, motor pool, or hangar.

This effort has proven to be significantly more challenging than anticipated. Like the RC personnel and operations appropriations, it is time to move to an auditable system of RC equipment procurement within the purview of existing finance and logistics systems.

As we look to the future, the Department is working hard to continue meeting the needs of a 21st Century Total Force. To succeed, we must continue to provide our people with the necessary resources to get the job done.

Sincerely,



Richard O. Wightman, Jr.
Acting Principal Deputy

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Chapter 1 Overview

I. Strategic Context

The Reserve Component (RC) continues providing support to combat operations in the Middle East as an operational force, while additionally serving at locations world-wide to fill the requirements for missions, big and small. The RC personnel serving in these roles are an educated, all-volunteer force. These military men and women count on equipment to be available when needed, and modern enough to provide high compatibility with the Active Component (AC). The armed forces have been fortunate in receiving support to procure equipment needed and to upgrade equipment already in the inventory.

The challenges facing the armed forces stem primarily from declining budgets. The reduction of personnel, training funds, and a lack of modernized equipment will start to erode the readiness levels that have been at their peak during the current contingency operations. The RC has received adequate funding as it shifted to an operational force; however, budget tightening will challenge the armed forces to sustain funding support.

II. Scope of the Report

The National Guard and Reserve Equipment Report (NGRER), mandated in section 10541 of 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 FY 2008 National Defense Authorization Act directed new equipment reporting requirements for the National Guard's capability to perform its Federal responsibilities (e.g., suppress insurrections, provide assistance in cases of weapons of mass destruction or terrorist attacks, or execute the laws of the United States) in response to an emergency or major disaster. This guidance is highlighted in its entirety in Appendix A, and the National Guard Bureau responds to the requirements in Appendix B.

The three charts 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 tracking 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 2014 NGRER highlights 877 major equipment types whose total dollar value comprises approximately 85 percent of the value of all RC equipment. This report presents the results of analysis of RC

inventories based primarily on the dollar value of the equipment, which allows the aggregation, comparison, and summary of diverse types of equipment. The procurement costs are from the Services' official data and are either the latest procurement cost adjusted for inflation or the current replacement cost.

Chart 1-1 shows the number of types of equipment included in previous NGRERs 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 2009 NGRER	FY 2010 NGRER	FY 2011 NGRER	FY 2012 NGRER	FY 2013 NGRER	FY 2014 NGRER
ARNG	421	411	404	396	365	271
AR	222	220	212	208	215	230
USMCR	200	101	195	213	150	212
USNR	33	35	36	44	42	42
ANG	33	31	31	31	30	30
AFR	17	17	17	16	20	18
USCGR	15	19	19	19	53	74
Total	**941**	**834**	**914**	**927**	**875**	**877**

III. Equipment Shortages

The aggregate equipment shortage for all the RCs is approximately $51B. Chart 1-2 shows the dollar value of the current total major equipment requirements and inventories for each RC. The information this chart displays indicates the requirement for new procurement for the RC; however, it does not indicate capabilities, shortfalls, or compatibility 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.

The Army National Guard (ARNG) and Army Reserve (AR) equipment shortage costs depicted in Chart 1-2 show the cost based on requirements and on-hand inventories that include the actual required items and also modernized replacements. A modernized replacement is an item filling a shortage for which the unit requirements documentation will eventually change to the replacement item. For example, an M16A4 rifle filling a requirement shortage for an M16A2 rifle is a modernized replacement. Army modernized replacements have not been included for Chart 1-2 shortage computations in previous NGRERs. Including Army authorized substitutes in addition to modernized replacements would further reduce the ARNG and AR shortfalls.

The Air National Guard (ANG) indicates a 14.5% shortage based on needs that are identified in the Air Reserve Component Weapons and Tactics Conference (WEPTAC) and the ANG Domestic Operations Equipment Requirements (DOERs) Conference books, in addition to vehicle and support equipment requirement shortfalls.

The Marine Corps Reserve (USMCR) reflects a 12.6 percent shortage of its major items; however, the USMCR is equipped to a home station training allowance only. 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.

Chart 1-2. Beginning FY 2013 Reserve Component Equipment Shortages

Reserve Component	Requirements ($M)	On-hand ($M)	Shortage ($M)	Shortage (% of Reqd $s)
ARNG	111,556.7	81,850.7	29,706.0	26.6%
AR	29,635.5	20,757.0	8,878.6	30.0%
USMCR	5,943.8	5,196.5	747.3	12.6%
USNR	9,756.2	8,803.7	952.5	9.8%
ANG	61,222.3	52,374.8	8,847.5	14.5%
AFR	26,690.1	24,354.8	2,335.3	8.7%
USCGR	63.3	53.8	9.5	15.0%
Total	**244,867.9**	**193,391.2**	**51,476.6**	**21.0%**

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

IV. Equipment Procurement

Chart 1-3 shows funding levels from RC procurement sources for FY 2008–FY 2014. The FY 2014 funding does not include any NGREA or Congressional additions, since those funding amounts are not established until after the publication of the FY 2014 NGRER.

Chart 1-3. Reserve Component Procurement Funding

FY	Procurement Funding Source	RC Procurement Funding ($M)							
		ARNG	AR	USMCR	USNR	ANG	AFR	Total	Grand Total
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**		**$9,012.3**
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	154.7	62.4	1,247.8	
	Total	**6,297.1**	**1,362.6**	**171.8**	**267.5**	**1,385.6**	**507.4**		**$9,991.9**
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	535.0	0.0	0.0	73.7	183.4	0.0	792.1	
	NGREA	250.0	140.0	70.0	70.0	250.0	70.0	850.0	
	Total	**4,607.4**	**1,811.8**	**94.5**	**217.5**	**1,048.7**	**165.2**		**$7,945.0**
2012	President's Budget P-1R Submit	3,447.6	764.5	8.5	194.2	262.3	137.1	4,814.2	
	Congressional Adds to AC Accts for RC					47.2		47.2	
	NGREA	325.0	145.0	65.0	75.0	315.0	75.0	1,000.0	
	Total	**3,772.6**	**909.5**	**73.5**	**269.2**	**624.5**	**212.1**		**$5,861.4**
2013	President's Budget P-1R Submit	1,612.1	611.4	19.2	119.7	267.5	318.5	2,948.5	
	Congressional Adds to AC Accts for RC								
	NGREA								
	Total								**$2,948.5**
2014	President's Budget P-1R Submit	2,288.1	431.1	64.5	253.0	286.4	754.1	4,077.3	
	Congressional Adds to AC Accts for RC								
	NGREA								
	Total								**$4,077.3**

Note 1: The above figures do not include Ammunition procured for the RC.
Note 2: USNR figures include USMCR aircraft procurement funds.
Note 3: 2008-2012 NGREA include both Title III & IX funding.
Note 4: 2013-2014 Congressional Adds and NGREA values will not be available until 2013 and 2014 appropriation bills are passed.

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)

In FY 2012 the ARNG provided support to overseas contingency operations using 19,752 Soldiers in the Middle East, Africa, Kosovo, and Guantanamo Bay, while simultaneously providing support in state missions for floods, tornados, wildfires, and winter storms. There have been significant improvements in equipping and modernizing the ARNG as an operational force over the last several years to include: additional funding ($41.99B in new equipment from FY 2005–FY 2011),

an improved equipment on-hand (EOH) for modified table of organization and equipment (MTOE) units (81 percent in FY 2009 to 89 percent in FY 2012), and increased modernization.

The ARNG's top equipping focus areas are:

1. **Modernizing the ARNG helicopter fleet:** Significant modernization continues for the ARNG aviation fleet. The AH-64D Apache will be fully fielded to the ARNG by FY 2014. The CH-47D Chinook will be modernized to the CH-47F by FY 2018. The UH/HH-60A Blackhawk will be modernized to the UH/HH-60L/M by FY 2023. The OH-58A/C Kiowa Warrior will be modernized to the UH-72A Lakota by FY 2016.

2. **Procuring general engineering equipment to fill critical shortfalls and replace aging equipment:** General engineering equipment, which includes firefighting, support, and construction equipment, has critical shortfalls of on-hand items, and the current equipment is aging and past its useful life cycle.

3. **Enhancing the ARNG chemical, biological, radiological, and nuclear (CBRN) response capability:** The ARNG completed activation of 10 Homeland Response Forces (HRFs) in 2012. These HRFs correspond to the Federal Emergency Management Agency Regions, providing mission control and life-saving capability within a 6–12 hour response time.

4. **Equipping the ARNG to no less than 80 percent of Critical Dual Use (CDU) items:** The Army Equipping Strategy is to fill each of the approved CDU equipment line items to at least 80 percent. The CDU EOH levels have increased over the past two years from 83 percent to 89 percent in FY 2012.

5. **Increasing ARNG unit capability and building operational depth by focusing on modernization and improving equipment interoperability:** The ARNG recently completed the third year of a six year effort to modernize all the tanks and Bradley fighting vehicles in its Heavy Force, which includes seven Heavy Brigade Combat Teams (HBCTs), three separate Combined Arms Battalions (CABs), and an Armored Reconnaissance Squadron (ARS). All the HBCTs, CABs, and ARS will receive new Bradley Vehicles and tanks by FY 2015.

6. **Building essential field-level maintenance facilities to effectively repair, service, and maintain ARNG equipment:** Many ARNG shop facilities are more than 50 years old and are not designed nor equipped to provide a safe, environmentally-friendly working environment capable of supporting and maintaining a modern and complex, up-armored vehicle fleet meeting the demands of the Army's two-level maintenance doctrine.

B. The Army Reserve (AR)

The Army Reserve provides a critical portion of the Army's contingency response force as an operationally adaptive capability focused on combat support and combat service support. The Army Reserve is leaning forward to play a vital role in support of homeland defense (HD) and defense support of civil authorities (DSCA) using critical dual use equipment.

The Army Reserves' top equipping focus areas are:

1. **Resource, modernize, and sustain critical equipment, infrastructure, and automation systems that maintain Army Reserve as part of an operational force:** The Army Reserve is ideally suited to support missions in combat support and combat service support, which is a vital role in supporting the Army as an operational force, as well as, HD and DSCA domestic missions. Equipment fleet age is a challenge for much of the inventory across the Army Reserve; aggressive rebuild programs with incremental replacement of legacy systems provide a viable solution for modernization.

2. **Increase simulation investment and utilization at home station training:** Technological advances in simulators have made it more efficient and cost effective to mitigate training equipment shortfalls at home station and training centers. Increasing simulation and simulator programs, such as virtual simulators and constructive simulations, allows for realistic training at a lower price.

3. **Anticipate an expanded role in HD and DSCA (Critical Dual Use equipment):** The Army Reserve has a presence in communities in every state and territory in the United States, and has started engaging in the DoD planning process for complex catastrophes as a result of the National Defense Authorization Act 2012, which authorizes access to Army Reserve Soldiers, units, and equipment, to provide support during domestic emergencies and major disasters. The Army Reserve has a wide range of capabilities available for use in support of HD and DSCA operations.

C. The United States Marine Corps (USMCR)

The Marine Corps Reserve is an integral element of the Marine Corps total force. The RC has routinely supported operations in Afghanistan and Iraq, while concurrently sourcing combatant commander requirements for a variety of other missions.

The Marine Corps equipping strategy is that RC units maintain on-hand an equipment training allowance only. An RC unit's training allowance is the portion of its wartime equipment requirement necessary to conduct home station training. Marine Corps operating concepts rely on global sourcing and pre-positioned assets for combat. When activated, the Marine Corps plans on RC units falling in on either pre-positioned equipment or assets already in theater from previous rotations.

The Marine Corps Reserve's top equipping challenges are:

1. **Implementing results of strategic review from Force Structure Review Group (FSRG):** As the RC continues to relocate units to implement FSRG decisions, the transfer and maintenance of the corresponding equipment remains an equipping and maintenance challenge for the force. As additional capabilities are increased within the RC, the requirement to sustain the associated equipment has also increased. The FSRG transitioning process will require at least four more years to be fully implemented. This ensures that efficient transfer of equipment, while sustaining enduring programs for maintenance, will remain an equipping challenge.

2. **Transitioning the KC-130 platform:** The KC-130J aircraft has already been fielded to the AC Marine Corps while the KC-130T will remain in service in the RC until beyond the year 2020. The 28 KC-130Js programmed for the RC will start fielding in 2015, with completion well into the future. Maintaining both platforms creates challenges in logistical support, maintenance, and aircrew requirements.

D. The United States Navy Reserve (USNR)

The Navy Reserve is seamlessly integrated into the Navy total force providing cost effective operational support with more than 3,600 mobilized or deployed Navy Reserve Sailors serving worldwide. Major operational and contingency plans require RC units to deploy as integrated parts of the Navy warfighting plan. The Navy has multiple ongoing initiatives to modernize, improve, or change the operational capabilities of the RC.

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

1. **Aircraft procurement (C-40A, E/A-18G, P-8A, KC-130J, F/A-18E):** Replacing aging aircraft and upgrading current platforms are critical for the Navy Reserve to continue operational support as a highly-valued part of the Navy total force.

2. **Expeditionary equipment procurement:** Because the Navy Expeditionary Forces are 50 percent Reserve, proper equipping of those RC forces is critical to continued seamless operations. Prior year funding continues to fill critical equipment gaps in the modernization and recapitalization of the Naval Construction Force (NCF), Navy Expeditionary Logistics Support Group (NAVELSG), and Coastal Riverine Force (CRF) units. However, these RC Navy Expeditionary Combat Command (NECC) units still require $257M of funding across the Future Years Defense Program (FYDP) for full modernization and outfitting.

3. **Naval Special Warfare (NSW) equipment:** At any given time, one-third of NSW RC personnel are providing operational support to the NSW total force. Since the force became operational in 2008, The NSW RC has relied heavily on AC units to provide equipment for both training and deployment. The increasing worldwide demand for NSW RC forces leaves critical equipment shortages that need to be addressed.

E. The Air National Guard (ANG)

The Air National Guard is currently providing over 25 percent of the total AF's Middle East area of responsibility requirement with more than 15,000 members mobilized or deployed. Domestically, as of August 2012, the ANG has conducted 368 fire retardant drops using the seven C-130 Modular Airborne Firefighting System (MAFFS) units in response to 35 wildfires.

The ANG's top equipping challenges are:

1. **Adequate funding for weapon system modernization efforts:** The prolonged high operations tempo for the ANG is driving a need to concurrently modernize and recapitalize the aircraft fleets, a need also shared by the AC.
2. **Sustaining legacy weapon systems:** The ANG's aging aircraft fleet faces significant sustainment and support costs with the average age of aircraft being 28 years.

Modernizing, maintaining, and sustaining capabilities in this rapidly changing operating environment is one of the many current and future challenges the ANG mission support community faces.

3. **Adequate funding for acquiring equipment to support civil authorities:** The ANG's Federal mission is to provide well-trained and well-equipped units for prompt mobilization during war and to provide assistance during national emergencies. ANG members provide DSCA and are integral to the composition of the newly formed HRFs and Chemical, Biological, Radiological, Nuclear, and High-yield Explosives (CBRNE) Enhanced Response Force Packages (CERFPs).

F. The Air Force Reserve (AFR)

The force structure changes announced with the FY 2013 President's Budget include Air Force plans to retire 82 AFR aircraft in the next few years. This action reduces the AFR inventory by 61 airlift and aerial-refueling aircraft, as well as 21 fighter jets. This will retire the Air Force's oldest aircraft, make room for newer models, and consolidate similar types of aircraft at common locations as much as possible.

The AFR's top equipping challenges are:

1. **Defensive systems:** The AFR continues to focus on the modernization of legacy aircraft defensive systems to reduce aircraft vulnerability/survivability risk during combat operations. All AFR C-130H2/H3 aircraft have been modified with Large Aircraft Infrared Countermeasures (LAIRCM) capability, which provides aircraft with advanced protection from the threat of infrared-seeking surface-to-air missiles. This fulfills one of AFR's most critical aircrew/aircraft survivability requirements. All AFR C-5A aircraft have been modified with AAR/ALE-47 aircraft defensive systems. Defensive system modification enables C-5As to remain relevant to combatant commanders by allowing access to airfields restricted to aircraft with self-defense capabilities.

2. **Data link and secure communications:** The AFR continues to focus on modernization of its airborne capabilities supporting image/video, threat updates, and secure line-of-sight (SLOS)/beyond line-of-sight (BLOS) communications for combat missions. Commercial off-the-shelf (COTS) products continue to allow major improvements in SLOS/BLOS and data link communications. The AFR is making progress on adding SLOS/BLOS on all AFR fighters and adding permanent data links for AFR combat search and rescue assets.

3. **Acquisition execution:** Acquisition timelines on AFR programs are increasing due to challenges that include polices, over regulation, and under-resourced requirements affecting procurement planning and multi-year execution standards. The AFR is actively presenting three to five year procurement plans for Air Force Materiel Command using courses of action that depict multiple funding scenarios. Contractual options or other contractual vehicles allowing for flexible order quantities will be put in place, where possible.

G. The United States Coast Guard Reserve (USCGR)

The Coast Guard Reserve (CGR) is comprised of 8,100 funded billets, which is approximately 20 percent of the Coast Guard's total force strength.

All equipment used for Coast Guard domestic operations is provided through the Department of Homeland Security budget. Specific equipment for the Coast Guard to utilize while performing defense operations in support of overseas contingency operations (OCO) has been funded through the DoD OCO budget allocation to the Coast Guard. The equipment includes boats, spare parts, communications gear, and weapons systems that are interoperable with the U.S. Navy and allied forces. The CGR's primary end users of DoD OCO-funded equipment are the eight Port Security Units, which deploy in support of the combatant commands on a rotating basis. The two main boat platforms used by the CGR are the Defender Class Response Boat and the Transportable Port Security Boat.

The Coast Guard Reserve's top equipping challenges are:

1. **Personal Protective Equipment (PPE):** Approximately 65 percent of the CGR have mobilization requirements that require PPE to safely conduct Coast Guard operations. The FY 2012 shortfall of PPE for CGR personnel increased by 10 percent due to budget constraints, and price increases for PPE have raised the $549K shortfall in FY 2012 to $620K in FY 2013.

2. **Port Security Unit (PSU) and Mobile Support Unit (MSU) equipment:** The PSUs and MSUs maintain a constant state of readiness to deploy in support of the combatant commands as well as Coast Guard port security missions—their ability to deploy is dependent on the availability of AC and DoD-funded training platforms and equipment for operations. For the Coast Guard to sustain and support DoD efforts, additional funding is required to secure more Reserve training platforms.

3. **Availability of equipment platforms for Reserve training, qualification, and certification:** Since the Coast Guard Reserve is fully integrated with the AC, ongoing operational needs limit the availability of boat platforms and equipment for Reserve training, qualification, and certification, further impacting Reserve readiness.

Chapter 2
United States Army Reserve Components

I. Army Overview

A. Army Planning Guidance

As our Army transitions from a decade of war, it is critical for us to focus on the future. Successfully preventing conflict, shaping the environment, and winning our Nation's wars requires substantial preparation across our Army. We must strive to understand the complex future and prepare our Army to operate and adapt in any environment. As we prepare our Soldiers, leaders, and units for the future, we must provide a foundation to design training and education, build leader development programs, and develop required capabilities for our Army.

The operational environments we will encounter in the future will differ from Iraq and Afghanistan. Although there may be similarities, the multitudes of different actors, interests, and conditions in each conflict create unique and complex environments. While history provides us indicators of the future, it is difficult to predict with any certainty what character future wars will take.

However, we do know some things about the future. The Army must continue to be prepared to answer the call no matter what the task. Our military dominance will shape how potential adversaries perceive us, and the strategies they will employ. Adversaries will seek to deny the United States the advantages of our preferred way of war. They will deny our use of standoff precision weapons, negate our intelligence capabilities, and force the United States into unfavorable positions. Opportunistic adversaries will use the sheer complexity of all the elements interacting in an environment to frustrate commanders and confound senior policy makers.

One thing is certain—in future operational environments our Army must be operationally adaptable. We must possess agile and innovative leaders organized in versatile units capable of effectively operating across the range of military operations. Our future success is dependent on building an operationally adaptable force capable of effectively operating in any environment.

(Adapted from General Robert W. Cone's Foreword in *Operational Environment to 2028: The Strategic Environment for Unified Land Operations*, dated 20 August 2012.)

B. Army Equipping Strategy

The Army Equipping Strategy describes the ends, ways, and means the Army will use to ensure Soldiers and units have the right equipment in the quantities needed to accomplish assigned missions in support of combatant commander requirements. It describes how equipment and capabilities, provided by the Army Modernization Strategy, are distributed and placed into a unit to synchronize it with its assigned mission. The strategy establishes goals, targets, and metrics for achieving a balance between requirements and resources.

The scope of the Equipping Strategy includes the entire Army: Active Component (AC), Army National Guard (ARNG), and Army Reserve (AR). It addresses the Operational Force (both rotational and non-rotational) and the Generating Force. The strategy is a dynamic and flexible document that addresses the divergent needs and requirements for all components.

1. Ends

The Army's equipping goal is to ensure that Soldiers and units always have the equipment they need to execute assigned missions; whether units are progressing through the cyclic readiness model, are non-rotational units, are in the Generating Force, or are conducting homeland defense (HD) or defense support of civil authorities (DSCA) missions. Ensuring Soldiers and units have the equipment they need when they need it even though the Army does not have enough equipment to fill all units to their full authorizations, represents achieving an equipping "balance."

2. Ways

Army Force Generation (ARFORGEN) is the structured progression of readiness over time to produce trained, ready, and cohesive units. The Equipping Strategy encompasses three lines of operation that, together, support ARFORGEN. The first is the unit-focused main effort: Unit-based Equipping, which provides increasing levels of equipment to rotational units based on their ARFORGEN phase, critical equipping points, and assigned mission, focusing on placing equipment into the hands of units. It also equips non-rotational units and ensures the Reserve Components (RCs) have the equipment to support HD and DSCA responsibilities. The second line of effort is Managing Friction, which minimizes the impact of equipment not available to units. The final line of effort, Building Enduring Readiness, relates to institutional processes and requires ensuring the Army's relevant policies and procedures are synchronized to support all aspects of equipping.

3. Means

Precise Understanding of the Demand Signal—The Army must understand unit equipment requirements, the equipping demand signal, to maximize its ability to distribute equipment in the most effective manner. Unit equipment requirements are not only Modified Table of Organization and Equipment (MTOE) and Table of Distribution and Allowances (TDA) requirements, but also Operational Needs Statement, Mission Essential Equipment List (MEEL), Pre-deployment Training Equipment (PDTE), etc. These requirements are frequently unique to a specific place, unit, or mission, and they often change over time. These constantly changing requirements make it difficult to maintain a solid understanding of the real needs of commanders. To make the best use of limited resources and to be able to get the right equipment to the Soldier, when needed, equippers must have a way to know exactly what equipment units have and what equipment shortfalls exist.

100 Percent Equipment Visibility—Implicit in the ability to make informed equipping decisions is 100 percent visibility of major end item assets that the Army owns, uses, stores, or has in repair/recapitalization, transit, or some other process. The Army is creating a major end item asset visibility and redistribution capability using the Logistics Information Warehouse (LIW) as the Army's single authoritative materiel data repository for this information.

Focused Leadership—A key aspect of ensuring that an equipping strategy is successful is focused leadership. Leaders create the conditions for success by providing the goals, resources, direction, intent, guidance, and oversight needed to accomplish the mission. They also must clearly and unambiguously state requirements.

C. Plan to Fill Mobilization Shortages in the RC

Through ARFORGEN and the Equipping Strategy, the Army will continue to equip AC, ARNG, and AR units to meet mission requirements. The Army equips all forces based on their priority within the Dynamic Army Resourcing Priorities List (DARPL). It simultaneously ensures that the ARNG always has at least 80 percent of the equipment authorized in each unit's Mission Essential Task List. This allows the units to meet their HD and DSCA requirements when not deployed.

The Army makes certain that all units, AC, ARNG, and AR, are correctly equipped when they deploy. When there are shortages of certain items of equipment, the Army must use innovative methods to ensure commanders have the right amount and types of equipment to train with and use when deployed. A common method leverages PDTE sets and theater-provided equipment (TPE) to support training and to equip units to theater-specific equipping levels.

PDTE sets are pre-positioned at key Mobilization Force Generation Installations (MFGIs) 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 modernized equipment sets to facilitate individual and unit training prior to deployment. These sets remain at the MFGIs when the units deploy.

When the units arrive in theater, they are issued TPE. Maintaining TPE in theater serves valuable purposes. It minimizes the cost and friction of deploying the equipment back and forth with returning and deploying units, and it ensures that theater-required equipment is where it needs to be.

D. Initiatives Affecting RC Equipment

1. Current Operations

The Army's operational tempo in support of overseas contingency operations (OCO) has lessened, but it still places a strain on the force, particularly with the ARNG and AR. As the operating tempo slows, the Army moves to a Boots on the Ground (BOG): Dwell ratio of 1:2 for the AC and a Mobilization: Demobilization (Mob: Demob) ratio of 1:4 for the ARNG and AR by early 2013. When it does so, the strain on personnel will reduce. Counter-intuitively, however, the strain on equipping will increase, due to increased need for equipment caused by longer Train/Ready phases.

The Nation's uncertain fiscal situation, combined with anticipated future reduction in wartime demand, is prompting calls for decreased defense spending. Department of Defense (DoD) leadership has heeded these calls, directing the departments to make hard choices and reduce spending. The next 10 years will be a dynamic environment of changing operational demands coupled with reduced defense spending. The Army's goal is to have an affordable and versatile mix of tailorable and networked units operating on a rotational cycle and capable of full spectrum operations.

Regardless of the Mob: Demob ratios, the Army is committed to ensuring that ARNG and AR 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 update the Critical Dual Use (CDU) equipment list identifying those MTOE items necessary for the accomplishment of the ARNG and AR Federal missions, and in the case of the

ARNG, State 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 ARNG and AR always have the equipment necessary to meet domestic operational requirements.

There are five focus topics used to bring the ARNG and AR capabilities in line with future demands: Operationalizing the Reserves, Transparency, Homeland Defense and Defense Support of Civil Authorities, RESET Phase, and What We Bring to the Fight.

2. Operationalizing the Reserves

Today's Army was built as a Total Force and demands for U.S. ground forces have required almost continuous operational use of the ARNG and AR to meet requirements. As part of our overall efforts to build the Army of the 21st century, it is important that we take a critical look at how the Army plans to use the ARNG and AR in the future and what policies governing this use will require modification to achieve more efficient mobilization and effective employment of ARNG and AR forces. The Army has made significant progress in transforming the ARNG and AR from strategic reserves into operational forces that are fully integrated into the ARFORGEN model. In parallel with a Secretary of Defense-directed review, the Secretary and Chief of Staff of the Army commissioned an independent panel to review the policies and assumptions governing use of the ARNG and AR to ensure that we can deliver a sustained flow of trained and ready land forces to meet the challenges of the 21st century. The Secretary and Chief of Staff of the Army panel reported that operationalizing was the correct approach, and that the Total Force concept needs to be institutionalized to increase the talent pool available for operations. It reported that "while there are issues to address with an operational reserve, the benefits far outweigh the challenges and represent the best path forward."

3. Transparency

In 2008, the Secretary of Defense directed the Services to provide increased transparency of equipping the ARNG and AR. Specifically, the Services were charged with providing increased visibility and accountability of National Guard and Reserve equipment in the formulation of the annual budget, and for tracking and tracing National Guard and Reserve equipment through the acquisition process from procurement to delivery.

To implement these directives, two important steps were taken by all Services. First, component level funding and procurement quantities were included on key Congressional budget exhibits, such as the Budget Item Justification Sheet (the "P-40" form) and the Production Schedule (the "P-21" form). Providing this data gives both Congress and the National Guard and Reserve greater confidence that the equipment requirements programmed in the budgeting process were both accounted for and clearly visible in the President's Budget submission. Consistent with DoD's intent, it also provided stakeholders with component-level funding data that could be linked to the acquisition process.

The second step taken was to track the delivery of funded equipment. The format for this tracking effort was standardized for all of the Services and is called the Equipment Transparency Report (ETR). In close coordination with the ARNG and AR, HQDA prepares the ETR semiannually and then provides the report to the Office of the Assistant Secretary of Defense for Reserve Affairs

(OASD(RA)). Collecting the data is largely a manual process for the Army because the databases currently in use were not designed to link a piece of equipment delivered to a unit with the funding that resourced the procurement. As an example, a new truck may be funded by the FY 2012 appropriation and, ultimately, delivered to an ARNG unit, but there is no automated linkage between the truck and the FY 2012 appropriation used to fund the procurement.

The task of providing increased transparency has given the Army an opportunity to closely examine many of its systems and processes. Several working groups have been focused on improving programming, finance, contracting, and logistics automation systems. Although implementing permanent solutions will take time, immediate steps have been taken to increase transparency. A secure, online collaborative tool is now in use that provides HQDA, as well as the ARNG and AR, the ability to see and manipulate programming and budgeting data real-time as budget exhibits are created. The same collaborative system also allows Army programmers, budget analysts, and acquisition specialists to build the ETR on-line, while maintaining full visibility for the ARNG and AR.

Oversight of the transparency effort is maintained by a multi-component General Officer Steering Committee (GOSC) that meets quarterly to review programming, budgeting, procurement, and delivery data. Supporting the GOSC are Integrated Product Teams (IPTs) that ensure budget and procurement documentation are accurate and consistent. The IPTs also supervise the on-line data collection effort and prepares the ETR for GOSC review and approval. IPT leadership maintains close working relationships with both the OASD(RA) and other DoD staff agencies.

The Army fully supports DoD's efforts to increase transparency for the ARNG and AR and is in full compliance with all directives. The Army also continues in its efforts to automate the data collection process and has made significant progress in that area. Along with supporting DoD's transparency efforts, the Active Army, ARNG, and AR are also keeping Congress apprised of progress in this area and have provided numerous updates to both Senate and House professional staff members since the transparency effort began in 2008.

4. Homeland Defense, and Defense Support of Civil Authorities

The Army is playing an increasing role in HD and DSCA missions. In accordance with direction from the Chairman of the Joint Chiefs of Staff, the Army provides the bulk of the Defense Chemical, Biological, Radiological, and Nuclear (CBRN) Response Force (DCRF) for FY 2013 and beyond. The Army provides specific capabilities for Federal military assistance to civilian agencies 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 Northern Command's (NORTHCOM's) mission to support civil authorities in the event of a disaster.

The equipment used by the ARNG and AR to conduct DSCA missions and, in the case of the ARNG, state missions is dual-use equipment that comes primarily through Army base budget procurement and commercial off-the-shelf (COTS) equipment procurement by the AR and ARNG. It is also equipment that has been cascaded from the AC to the ARNG and AR.

Like AC units, as ARNG and AR units progress through the Reset and Train/Ready phases, they will be equipped at less than 100 percent. This represents risk in the ability to respond to HD and

DSCA missions. Placing continuing emphasis on procurement and management of CDU items will help ensure that the necessary equipment is available for mission execution.

5. RESET Phase

Under the Army's ARFORGEN cycle construct, the RESET phase is a six-month process for the AC and a twelve-month process for the ARNG and AR to systematically restore deployed units to levels of personnel and equipment readiness that permit the resumption of training for future missions. It encompasses those tasks required to reintegrate Soldiers and families.

RESET includes all those activities that return previously deployed equipment to at least full mission-capable standards, some with upgraded capabilities. The Reset process incorporates critical materiel lessons learned from Operations Iraqi Freedom, New Dawn, and Enduring Freedom, e.g., installing protective armor on high mobility multipurpose wheeled vehicles (HMMWVs). Obsolete equipment is replaced, and pre-positioned stocks are reconfigured to be more strategically relevant and responsive.

The Army has minimal training expectations of ARNG and AR units during RESET. However, it makes a concerted effort to ensure these units are equipped to their desired Aim Point by the end of the RESET phase for entry into the Train/Ready phase. For the ARNG, this is S-2 (80 percent or more of its MTOE or MEEL requirements), and for the Army Reserve this is S-3 (65 percent or more of its MTOE or MEEL requirements). Unlike the AC, where units in the Train/Ready and Available phases have priority over those in RESET in accordance with the DARPL, the Army will ensure the ARNG, as a whole, has at least 80 percent of CDU MTOE equipment to enable it to meet its HD and DCSA missions.

6. What We Bring to the Fight

The ARNG and AR are full partners 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.

The ARNG and AR have undergone tremendous change in the last ten years. They have been transformed from strategic reserves to an operational force. They have seen equipping change from a Cold-War paradigm of tiered-readiness, where they were often equipped with obsolete equipment and had significant shortages, to the ARFORGEN structured progression of readiness over time, to produce fully modernized and equipped, trained, ready, and cohesive units. The ARNG and AR play an essential role in the National Defense Strategy. The ARNG and the AR serve alongside AC units in Iraq and Afghanistan. They serve in the Sinai, and in the Balkans. The ARNG and AR provide combat units, combat service support forces, special operations Soldiers, and unique capabilities critical to the Army's success.

E. Plan to Achieve Full Compatibility between AC and RC

The ARNG and AR are operational components, and they can continue to 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 AR units receive the same equipment as their AC counterparts when assigned similar missions.

The Army is also committed to fulfilling its DoD Instruction (DoDI) 1225.06 requirements to replace ARNG and AR equipment transferred to the AC. As of this writing, the Army has reduced the number of items it owes the ARNG and AR from over 85,000 to about 6,800 pieces of equipment. To ensure transparency, any new requirements must be accompanied with a memorandum of agreement signed by the AC and ARNG or AR and approved by the Secretary of Defense. Repayments are tracked item by item. Supplementary instructions providing Army procedures for implementing the changes are described in DoDI 1225.06.

II. Army National Guard Overview

A. Current Status of the Army National Guard

1. General Overview

Top ARNG Focus Areas

- Modernizing the ARNG helicopter fleet
- Procuring general engineering equipment to fill critical shortfalls and replace aging equipment
- Enhancing the ARNG chemical, biological, radiological, and nuclear (CBRN) response capability
- Equipping the ARNG to no less than 80 percent of Critical Dual Use (CDU) items
- Increasing ARNG unit capability and building operational depth by focusing on modernization and improving equipment interoperability
- Building essential field-level maintenance facilities to effectively repair, service, and maintain ARNG equipment

The ARNG supported overseas contingency operations (OCO) and domestic missions in FY 2012. In FY 2012, ARNG domestic support included flood and tornado response, winter storm and wildfire response, support to the Department of Homeland Security, and Customs and Border protection support along the U.S. Southwest border. In FY 2012 (as of September 26, 2012), 13,011 Soldiers have supported Operation Enduring Freedom in Afghanistan, 3,756 Soldiers supported operations in Kuwait, 1,190 Soldiers supported operations in Kosovo, 295 Soldiers supported operations in Cuba (Guantánamo Bay), 959 Soldiers supported operations in Djibouti (Horn of Africa), and 541 Soldiers supported operations in Egypt.

The ARNG continues to refine equipping efforts to support the Army's full-spectrum ARFORGEN–based Equipping Strategy. The Army's main effort is Unit-based Equipping, which provides increased levels of equipment to rotational units based upon ARFORGEN phase, critical equipping points, and assigned mission, focusing on placing equipment into the hands of units. This effort also provides for non-rotational units and ensures the ARNG has equipment to support HD and DSCA missions. The ARNG effort is concentrated on increasing unit capability to build operational depth by focusing on modernization, improving equipment interoperability, and emphasizing CDU equipment. As a result of these focused efforts, along with Congress's continued support of Army procurement, the ARNG is more capable than ever to support the Army and our Nation in OCO or HD/DSCA missions.

During FY 2011 and FY 2012, the ARNG made significant modernization improvements for important items. The ARNG obligated $104M of National Guard and Reserve Appropriation (NGREA) funds on engineer mobility systems, domestic operations equipment, and medical equipment. Purchases included the D7R Dozers, Joint Incident Site Communications Capability systems, and Ground Medical Equipment Sets. These systems play an integral part in ARNG missions at home and abroad. The ARNG will continue to focus on procuring systems and equipment to fill shortfalls and to replace its aging fleet.

The ARNG recently completed the third year of a six year effort to modernize all the tanks and Bradley fighting vehicles in its Heavy Force, which includes seven Heavy Brigade Combat Teams (HBCTs), three separate Combined Arms Battalions (CABs), and the 1-221st Armored Reconnaissance Squadron (ARS). This past year, three of the ARNG's seven HBCTs received modernized Bradley fighting vehicles, and one HBCT received modernized tanks. Engineers within the ARNG Heavy Force also started to receive modernized vehicles this year; the first

engineer units in the Army to do so. All seven HBCTs, CABs, and the 1-221st ARS will receive new Bradley Vehicles and Tanks by FY 2015.

Significant modernization continues for the ARNG aviation fleet. The AH-64D Apache will be fully fielded to the ARNG by FY 2014. The CH-47D Chinook will be modernized to the CH-47F Chinook by FY 2018. The UH/HH-60A Blackhawk will be modernized to the UH/HH-60L/M Blackhawk by FY 2023. The OH-58A/C Kiowa Warrior will be modernized to the UH-72A Lakota by FY 2016. NGREA continues to fund the UH-72A Lakota Mission Equipment Package (MEP) retrofit for HD and DSCA missions.

a. Status of Forces as an Operational Force

There have been significant improvements in equipping and modernizing the ARNG as an operational force over the last several years to include: additional funding ($41.99B in equipment from FY 2005–FY 2011), an improved Equipment On-hand (EOH) (80.7 percent in FY 2009 to 89 percent in FY 2012), an improved CDU EOH (83 percent in FY 2010 to 89 percent in FY 2012), and increased modernization. The ARFORGEN cycle provides predictability as units pass through three phases: RESET (equipment and Soldiers are most recently returned to home station after deployment), 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 supports OCO, domestic missions, and the state partnership program in countries around the world.

b. National Guard Support to Civil Authorities

In 2012, at the direction of state governors, the ARNG responded to significant wildfires in CO, WY, NE, SD, MT, CA, NV, MN, OK, AR, TX, MI, and NY that resulted from below-normal rainfall. During FY 2012, the ARNG has responded to over 239 Support to Civil Authorities events. Table 2-1 below provides further detail.

Table 2-1. Support to Civil Authorities

Event Type	Event Amount	Event Type	Event Amount
Key Asset Protection	2	Search and Rescue	39
Law Enforcement Support	7	Water Support	10
Winter Storm Response	8	Tornado	3
Floods	7	EOD	5
Special Events	5	Southwest Border	1
Fires	50	Severe Weather	6
Civil Support Team (CST) Responses	86	Counterdrug	3
Hurricanes - Tropical Storms	2	Other	5

i. CBRN Enterprise

The National Guard comprises 66 percent of the entire DoD CBRN Enterprise (approximately 10,559 ARNG Soldiers and 1,558 Airman). Based on the recommendation of the 2010 Quadrennial Defense Review, the ARNG stood up 10 Homeland Response Forces (HRFs). Each

HRF consists of mission control elements, CBRN Task Forces, and Casualty/Assistance Support Elements, totaling 566 Soldiers. The HRFs are aligned by Federal Emergency Management Agency Region with one in each region. Two HRFs were operational at the end of FY 2011 and the remaining eight conducted validation in FY 2012. The HRFs are a regional approach to the national coordinated CBRN Response. HRFs are designed to provide mission control and life-saving capability within a 6–12 hour response time. The HRF is designed to provide mission control for a maximum of 3 CBRNE Enhanced Response Force Packages (CERFPs). The CERFP is the primary life-saving capability of the ARNG's CBRN enterprise. Currently, there are 57 Civil Support Teams, 17 CERFPs, and 10 HRFs within the ARNG.

The ARNG sources the Command and Control, CBRN Response Element Bravo (C2CRE-B). C2CRE-B consists of 1,915 highly trained Soldiers designated to respond in a Title 10 status to a CBRN attack in the NORTHCOM area of responsibility (AOR).

ii. ARNG Division Headquarters, Division Coordination Cell in a Domestic All Hazards Response Mission (DARM)

ARNG Division Headquarters facilitates the states' ARNG domestic all-hazard response, beginning at the lowest state echelon, by identifying the "Essential 10" capabilities and aligning them with the existing state all-hazards plan to fill capability-based gap requirements. The Division Coordination Cells utilize the DoD reporting systems as operational planning tools to generate state National Guard force packages to aid in mitigating identified state disaster response gaps during crisis action planning.

2. Status of Equipment

The ARNG continues to manage available resources effectively to support both Federal and state missions. Total EOH is at 89 percent in 2012, with 81 percent of MTOE equipment in the continental United States (CONUS) available to the governors. This EOH percentage does not include TDA requirements that are critical to military occupational specialty (MOS) producing schools, Civil Support Teams (CSTs), pre-mobilization training, states' Joint Force Headquarters (JFHQs), and other ARNG TDA requirements. Additionally, some TDA equipment is critical in performing HD and DSCA missions.

Beginning in FY 2006, the Army significantly increased its investment in ARNG equipment to meet overseas contingency requirements, convert to a modular force, and fulfill its CDU equipment commitment. As a result, ARNG EOH (MTOE only) has increased from 69 percent to 89 percent in FY 2012. The ARNG CDU EOH, a subset of MTOE equipment, increased from 65 percent to 89 percent during this same period. This rapid improvement in ARNG EOH is impressive and essential to ensuring the ARNG is capable of fulfilling its missions. The ARNG EOH percentages will be affected by changing MTOEs and modernization of equipment; however, the net result will be a more ready and modern force prepared for utilization as an operational force.

a. Equipment On-hand

The ARNG has aligned itself to continue supporting the Army's full-spectrum ARFORGEN-based Equipping Strategy by focusing on modernization, improving equipment interoperability, and emphasizing CDU equipment. As a result of these focused efforts and Congress's continued support of Army procurement, the ARNG is more capable than ever to support the Army and our

Nation in OCO and HD/DSCA missions. Over the past year, the ARNG received 104,000 new items of equipment valued at $3.6B. With this new equipment, the MTOE EOH percentage has risen to 89 percent, and the ARNG also has 89 percent of its CDU equipment currently on-hand.

i. Table of Distribution and Allowances (TDA) Unit Equipment

ARNG TDA units contribute to domestic response missions. Such units include states' Joint Force Headquarters, which consist of The Adjutant Generals and their staffs who provide command and control support for state missions. CSTs are also TDA units, and there are currently 57 CSTs throughout the United States. CSTs are required to deploy to provide assistance to local first-responders in determining the nature of an attack and to provide expert response advice. Although TDA units generally do not deploy, there are exceptions. TDA units require equipment to train units, which contributes to the readiness and availability of ARNG units. TDA units are usually lower priority and may inherently have older generation equipment and more shortages as they compete with deploying units for resources.

ii. 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 uses the ARFORGEN cycle 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 overall EOH over the past few years have correspondingly reduced the need to cross-level equipment to more manageable levels. To support mobilization requirements, the ARNG directed the cross-leveling of 2,917 items ($55M value) between states and territories in FY 2012.

iii. DoD Instruction 1225.06-Equipment Transfers to Contingency Operations

For the past decade, ARNG units have been directed to transfer ARNG equipment in theater to support various urgent warfighter needs. As equipment requirements are identified, ARNG will continue to coordinate with HQDA staff to best meet the needs of the combatant commanders and the Army. OASD(RA), in an effort to establish greater transparency and traceability controls over RC equipment transfers, undertook the rewriting of the DoD Directive (DoDD) 1225.6. On May 16, 2012, the new DoD Instruction (DoDI) 1225.06, *Equipping the Reserve Forces*, was signed. This instruction supersedes the previous directive and provides enhanced reporting requirements to maintain transparency and accountability of ARNG equipment. The Army has also published additional supplementary instructions that clearly outline and define the Army internal processes and procedures that will be used to transfer ARNG and AR equipment in accordance with DoDI 1225.06. The ARNG is continuing to monitor replacement requirements approved by the Secretary of Defense, to include the approved listing of equipment the ARNG had been directed to leave in theater during the period 2003–2008 and all 1225.06 transfers since 2009. Through regularly scheduled IPT meetings consisting of members from HQDA, Army Materiel Command, ARNG, and AR, all theater equipment transfers and replacement plans are properly annotated and tracked. The ARNG continues to work closely with HQDA to ensure equipment is returned and future transfers are properly executed.

b. Average Age of Major Items of Equipment

The average age of ARNG equipment at the beginning of FY 2013 is reflected in *Table 2*. With an increase in manufacture and recapitalization programs through FY 2013, the historical issue associated with aging equipment has been alleviated. In the past, the ARNG received much of its equipment through the cascading actions of the AC, and the equipment transferred was often already at or near the end of its planned service life. Programmed replacements and rebuilding efforts for the ARNG equipment could not keep up with the needs of the ARNG. If the current levels of both new procurement and recapitalization efforts continue, it is anticipated that the average age of equipment will be substantially reduced in the future as more new and modernized equipment is moved into the ARNG inventory.

c. Maintenance Issues

i. Field-Level Maintenance

Many ARNG shop facilities are more than 50 years old and are not designed nor equipped to provide a safe, environmentally-friendly working environment capable of supporting and maintaining a modern and complex, up-armored vehicle fleet meeting the demands of the Army's two-level maintenance doctrine. The Military Construction funding required for modernizing ARNG surface equipment maintenance facilities is conservatively estimated at $2.24B, according to the ARNG Installation Division Planning Resource for Infrastructure Development and Evaluation database. Field-level maintenance is critical to ARNG equipment readiness in the ARFORGEN model and for HD, DSCA, and emergency operation missions. It is essential that the ARNG has modern maintenance shop facilities meeting current construction criteria to effectively repair, service, and maintain our operational force's equipment.

ii. National-Level Maintenance

The key to maintaining readiness of the ARNG fleet is the continued funding of the ARNG Surface Depot Maintenance Program. As 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 $416M, which is 81 percent of ARNG total validated requirement of $517M in FY 2012. 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 welding equipment. The RSMS completed maintenance on over 4,137 pieces of equipment in the past year.

iii. Home Station Reset

Under the Home Station Reset program in FY 2012, the ARNG continued to restore equipment returning from Iraq, Kuwait, and Afghanistan to Technical Manual 10/20 standards within 365 days of the unit's return to its home station. In the first nine months of FY 2012, the ARNG Home Station Field Level Reset Program (subset of Home Station Reset) completed the Reset of 272,434 pieces of equipment.

iv. Automatic Reset Induction (ARI)

Units redeploying from theater are required to induct into Sustainment Maintenance 100 percent of equipment identified by HQDA as ARI prior to their return to CONUS. For the National Guard to keep a high state of readiness and accomplish the Guard's state missions, the return of the equipment inducted into ARI is critical.

d. Overall Equipment Readiness

Readiness metrics were updated in 2011 to more accurately reflect the readiness status of the ARNG. This was necessary due to the RESET of units returning from deployments and units transforming under modularity. Due to the large amounts of equipment received in recent years and the anticipation of equipment returning from theater operations, the ARNG continues to manage readiness by prioritizing limited resources using the ARFORGEN cycle in support of the National Military Strategy. Additionally, extensive EOH data analyses and the launching of new, long-term equipping management initiatives allow the ARNG to better monitor equipment readiness and continually identify opportunities to improve EOH readiness.

e. Other Equipment Specific Issues

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. Funding for FY 2012 has filled only 75 percent of the ARNG's established surface maintenance technician requirements.

B. Changes since the Last NGRER

1. Transparency

The Army has continued aggressively pursuing transparency and traceability of procurement-funded equipment from the President's Budget request to delivery at the unit level during FY 2012. To this end, the Army has taken multiple steps toward achieving transparency, including institutionalizing a formal Post-Appropriation Reconciliation Process (PARP), supporting two IPTs and an Enterprise Management Office, publishing quarterly Equipment Transparency Reports (ETRs), maintaining component-specific funding information throughout the procurement cycle, and taking advantage of an Item Unique Identification (IUID) system for tracking equipment deliveries to their funding source. At the end of FY 2012, the Army's Transparency efforts were tracking a total of 116 programs with a combined value of approximately $19.6B. The ARNG supports and recognizes the continued Army effort towards developing solutions to systematically link new equipment deliveries with originally intended appropriations.

The Army has two separate IPTs addressing the related issues of financial traceability and transparency and delivery traceability and transparency. The Financial Synchronization and Transparency (FST) IPT, chaired by HQDA G-8 FD (Force Development), is chartered with determining the processes and best practices that need to be implemented to provide transparency of appropriated funds from initial budgetary requests to execution. Similarly, the Delivery Certification (DC) IPT, co-chaired by HQDA G-4 and G-8, is charged with designing and establishing a physical delivery tracking system that will link delivered equipment with its

initial funding source. Both of these IPTs continue to report the status of their efforts to the quarterly Transparency General Officer Steering Committee (T-GOSC).

Despite the uncertainly of receiving formal appropriations in any given fiscal year, HQDA continues to utilize the PARP to realign enacted funding with Congressional intent and HQDA budgetary requests. This process reestablishes component-specific funding splits so that the ARNG receives adequate funding to achieve and maintain its high state of equipment availability and readiness. Core to the process, the PARP establishes a metric from which deviations can be identified and assessed to determine, among other actions, whether payback actions are warranted and to gauge the overall efficiency of post-appropriation funds execution.

The Army continues to expand its equipment delivery and traceability transparency efforts to include a robust, automated IUID system that traces deliveries of equipment in unit property books to the funding year and appropriation from which those items were resourced. This system, when fully implemented, will facilitate Chief, National Guard Bureau (CNGB) compliance with National Defense Authorization Act (NDAA) 2008 requirements by providing a tool with which certification of equipment deliveries can be made. This effort is on schedule to become fully established by FY 2014.

Transparency efforts continue to pay dividends to the ARNG. Utilizing transparency-specific business rules and examining equipment deliveries, the Army has identified numerous instances where under-delivery of equipment or diversion of funds during FY 2009 and FY 2010 resulted in paybacks to the ARNG. The continued refinement and institutionalization of processes, business rules, and data systems established by the FST and DC IPTs will ensure the Army's transparency and equipment tracking processes remain on schedule for full implementation by FY 2013.

Product Manager, Joint-Automatic Identification Technology is currently in the process of adding IUID devices to all assets with a property book value of more than $5K to increase the Army's transparency efforts for equipment delivery to the ARNG. Efforts to increase this visibility will continue through FY 2014.

2. Significant Major Item Shortages (*Table 8*)

The item shortages of highest priority are not necessarily driven by shortfall costs, but rather our ability as a force to maximize readiness across all of the varied missions mentioned above.

Supporting the ARNG's dual CONUS/OCONUS role, UH-60 Blackhawk Modernization, semitrailers, Chemical/Biological Protective Shelters, Medical Field Systems, and General Engineering Equipment shortages are a high priority.

C. Future Years Program (FY 2014–FY 2016)

1. Anticipated New Equipment Procurements

The ARNG is projected to receive 78,523 pieces of equipment valued at approximately $9.1B from June 2012–September 2013. Highlights include 36 UH-72A Light Utility Helicopters, 37 AH-64D Apache Attack Helicopters, over 8,200 Thermal Weapon Sights, 321 Bradley Fighting Vehicles, 5,366 Family of Medium Tactical Vehicles (FMTV) trucks, and 2,173 FMTV trailers. With current funding levels, production capacities, and the age of ARNG equipment, the ARNG

tactical wheeled vehicle and helicopter fleets will continue to require a long-term investment of funding over the next 10 years to adequately address shortfalls and modernize fleet capabilities.

2. Anticipated Transfers from AC to RC

Table 5 provides the cascaded equipment that the ARNG is projected to receive. The AC has also received a large influx of newly procured equipment, especially for 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 2016.

3. Anticipated Withdrawals from ARNG Inventory

The anticipated withdrawals of equipment (by FY 2018) will be allowed by the implementation of new, rebuilt, reset, or cascaded equipment. Table 2-2 lists anticipated withdrawal items (left hand column) with their corresponding replacement system (right hand column).

Table 2-2. Anticipated Withdrawals versus Replacement System

Anticipated Withdrawals	Replacement System
CH-47D Cargo Helicopter	CH-47F Cargo Helicopter
M809 series 5 ton trucks	Family of Medium Tactical Vehicles (FMTV)
M939 A0/A1 series 5 ton trucks	Family of Medium Tactical Vehicles (FMTV)
M915A1/A2/A3/A4 Line Haul Tractor	M915A5 Line Haul Tractor
M198 Howitzer	M777 Towed Howitzer
M16A2 Rifle	M16A4 Rifle and M4/M4A1 Carbine
HMMWV M998, M1037, M1038	HMMWV M1097
M1A1 AIM/EDS Tank	M1A1 ODS-SA and M1A2 SEP Abrams
M2A2 ODS Bradley Fighting Vehicle (BFV)	M2A2 ODS-SA BFV
M3A2 ODS Bradley Fighting Vehicle (BFV)	M3A2 ODS-SA BFV
OH-58A/C Scout Helicopter	UH-72A Light Helicopter (LUH)
UH/HH-60A Utility/MEDEVAC Helicopter	UH/HH-60L or M Utility/MEDEVAC Helicopter

4. Funding for New and Displaced Equipment Training

New Equipment Training (NET)/Displaced Equipment Training (DET) funding is dependent on the amount of new equipment scheduled to be received. In FY 2012, the ARNG received $68.5M in NET funding to field new equipment. There are additional costs related to NET that are not specifically included in the NET event funding. For example, when a NET event requires live firing, states are statutorily mandated to provide range safety officers, range control managers, ammunition handlers, and medics. None of these additional costs are funded by the NET program. When equipment is fielded, additional equipment and personnel are frequently required to prepare or process the equipment for training. Additional National Guard Pay and Allowance funding would allow the states to provide an augmented body of Soldiers for required “support” and “processing” activities directly related to NET events.

5. ARNG Equipping Strategy

Reflecting the Army's Equipping Strategy, the ARNG will equip all units during FY 2014 in accordance with ARFORGEN equipping Aim Points based upon ARNG equipping resourcing priorities and the DARPL. Additionally, the ARNG will ensure that units are equipped to no less than 80 percent of CDU items. The ARNG is also coordinating with the Army Materiel Command as the Lead Materiel Integrator (LMI) for inclusion of ARNG requirements in the LMI policy and process. The equipping goal is to achieve equipping balance by ensuring Soldiers and units always have the equipment they need, when they need it, to execute assigned missions—whether units are progressing through the ARFORGEN cyclic readiness model, are non-rotational units, are in the Generating Force, or are conducting HD or DSCA missions.

6. Equipment Shortages and Modernization Shortfalls

The equipment item listings in each of the following Budget Operation System (BOS) areas are not an all-inclusive ARNG equipment shortage list but are BOS groupings of those shortages most critical to the ARNG for FY 2014. Such systems fulfill the Army's combat, combat support (CS), and combat service support (CSS) missions. Systems in the following BOS tables with fill percentages below 90 percent are candidates for NGREA funding.

a. Air Defense Budget Operating System

The Air Defense BOS consists of systems that detect, track, and destroy enemy air and missile attacks (see Table 2-3).

Table 2-3. Air Defense Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Funding Shortfall
Air/Missile Defense Planning and Control System (AMDPCS)	3	2	66%	$12M
Improved Sentinel Radar	82	44	53%	$70M
Air Defense Airspace Management System	81	50	62%	$12M

Air Missile Defense (AMD) systems have a significant role in supporting OCO missions and protecting our homeland airspace. The upgrade of existing Improved-Sentinel Radars is at 53 percent with fielding delayed due to theater needs and the FY 2012 continuing resolution. Planned funding will improve AMD C2 systems, but funding for the AMDPCS awaits the outcome of the future Army Integrated Air and Missile Defense System upgrade. Sustainment and modernization of legacy (Avenger) systems remains a concern.

b. Aviation Budget Operating System

FY 2014 EOH quantities comprise a mixed fleet of cascaded, new, converted, and retiring aircraft and are funded by procurement and NGREA funding (see Table 2-4).

Table 2-4. Aviation Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Funding Shortfall
UH-60 Blackhawk (Modernization)				
UH-60L Model	480	202	42%	
UH-60M Model	40	36	90%	$4,900.0M
UH-72A Lakota	81	85	105%	$0.0
AH-64D Apache	144	107	74%	$1,100.0M
CH-47F Chinook (Modernization)	24	9	38%	$402.0M
Aviation Ground Support Equipment (AGSE) (54 separate item types)	15,674	10,195	65%	$33.5M

Blackhawks, Chinooks, and AGSE are CDU items. UH-72 fielding (total requirement of 212) will be complete in FY 2016. Including cascades and increasing requirements, H-60A to L modernization is not planned to be complete until FY 2023–2027. AH-64D (full requirement of 192) will be fully fielded as Block IIs by FY 2017. All 161 CH-47s will be modernized to F-models by FY 2018. ARNG is divesting fixed-wing aircraft to support the Army's new MTOE company structure. The FY 2015 ARNG fixed-wing requirement will be reduced to 64 aircraft.

c. Maneuver Budget Operating System

The Maneuver BOS consists of combat vehicles (including the Abrams, Bradley, Hercules, Stryker vehicles, and armored personnel carriers), crew-served weapons systems, such as mortars and battlefield missiles, and the Long Range Acquisition Scout Surveillance System. Funding is in place to field all requirements by FY 2015.

d. Mobility Budget Operating System

FY 2014 EOH quantities comprise a mixed fleet of new build, rebuild, and legacy engineer systems and are funded by a mix of Army and NGREA procurement funding (see Table 2-5).

Table 2-5. Mobility Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Funding Shortfall
Hydraulic Excavator (HYEX)	133	97	73%	$12.7M
15-Passenger Boats	375	131	35%	$4.6M
Water Well Drill Rig	6	4	67%	$4.0M
Outboard Motor Gasoline: 40 Brake Horsepower (BHP)	122	0	0%	$2.2M
Outboard Motor Gasoline: 35 HP Silenced Waterproofed	365	67	18%	$1.3M

With the exception of the Water Well Drill Rig and 40BHP Family of Outboard Motors, the above systems are CDU items. Outboard motors are not procurable and have no projected contract date. The 15-Passenger Boat is not expected to be procurable until FY 2014 or 2015.

Water Well Drill Rig fielding is complete, but two systems were sent to theater to support OCO; ARNG and HQDA are staffing a payback plan.

e. Soldier Systems and Soldier Weapons (SLDR) Budget Operating System

The SLDR BOS includes night vision goggles (NVG), thermal weapon sights, weapon support items, and individual and crew-served weapons. On-hand levels are improving in all Line Item Number (LIN) families of the SLDR BOS. Many legacy systems are being modernized to lighten the Soldier load and improve performance. NGREA provided funds to fill shortfalls of M25 binoculars, shop maintenance sets, and NVGs. Full funding is planned to fill remaining shortages and modernize legacy equipment.

f. Strike Budget Operating System

The Strike BOS consists of all fire support and related systems (see Table 2-7).

Table 2-6. Strike Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Funding Shortfall
Bradley Fire Support Team Vehicle (BFIST) Family	101	87	86%	$444M
Lightweight Laser Designator Range Finder (LLDR) Family	1,091	897	82%	$71M
Counter-fire Radar Family	87	68	78%	$31M

Strike systems play vital roles in warfighting missions. ARNG firing systems (howitzers, rocket launchers, etc.) are fully fielded with modernization to complete in FY 2028. BFISTs will complete fielding in FY 2015. The LLDR family will complete fielding and modernization in FY 2019. The Counter-fire Radar family includes Fire Finders and Lightweight Counter-Mortar Radars (LCMRs). LCMRs are funded with fielding delayed by production challenges. Counter-fire radars are funded with fielding complete in FY 2020.

g. Mission Command Budget Operating System

Table 2-7. Mission Command Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Equipment Shortfall
Global Broadcast Systems (GBS)	304	198	65%	$23M
Blue Force Tracker (BFT)	30,007	17,316	57%	$203M

The Mission 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. Global Broadcast System (GBS) is a satellite communications system that provides large volumes of information to deployed or garrison forces. GBS is capable of processing both classified and unclassified information products such as: imagery, intelligence, video, theater message traffic, joint and Service-unique news, and weather. FBCB2/BFT is a

digital battle command information system that provides integrated, on-the-move, near real-time C2 and situational awareness information for platforms at echelons Corps and below, across all battlefield functional areas via radio and satellite communications.

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

Table 2-8. NBC Force Protection Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Equipment Shortfall
Chemical and Biological Protection Shelter (CBPS)	285	18 (substitutes)	6%	$251M

The NBC Force Protection BOS consists of systems to support chemical, biological, radiological, and nuclear activities. Production of the Medium Tactical Vehicle (MTV)-based CBPS System is scheduled to begin in the first quarter of FY 2013. The 18 systems on-hand in FY 2013 are legacy systems mounted on HMMWVs. Delivery of 16 systems for the ARNG is scheduled for FY 2015. The ARNG may use NGREA to supplement the Army's base-budget funding for CBPS and to extend the MTV platform production contract beyond FY 2014.

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

Table 2-9. IEW Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Equipment Shortfall
Prophet Electronic Support Spiral 1	69	15	22%	$108M

The IEW BOS consists of a variety of military IEW subsystems. The systems within the IEW BOS portfolio are the Trojan Special Purpose Intelligence Remote Integrated Terminal (SPIRIT), Prophet, Counterintelligence/Human Intelligence Automated Reporting and Collection System (CHARCS), and Distributed Common Ground System-Army All Source Analysis System-Light (DCGS-A). IEW equipment fielding is aligned with ARFORGEN Aim Points. The Prophet Electronic Support Spiral 1 equipment shortfall is the result of a production halt well short of the Army Acquisition Objective (AAO) (126 produced of 225 AAO); production delays in Prophet Enhanced (authorized in-lieu-of); CONUS fielding delays due to theater priorities and vehicle platform decision delays; and disparity between required manning to field the system per Basis of Issue Plan and the ARNG manning availability to receive the system. Prophet Enhanced is tentatively on schedule and on budget to meet 100 percent fill of Prophet (Spiral 1/Enhanced) AAO by the fourth quarter of FY 2016.

j. CSS Sustainment Budget Operating System

Table 2-10. CSS Sustainment Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Equipment Shortfall
Shop Equipment: Contact Maintenance	2,009	1,752	87%	$66.0M
2,000 Gal Water Tank-Rack (HIPPO)	660	509	77%	$23.0M
Multi-Temperature Refrigerated Container System (MTRCS)	303	113	37%	$21.5M
Assault Kitchen	114	43	38%	$5.4M

The CSS Sustainment BOS consists of medical, fuel, water, maintenance, and food systems. Recent utilization of FY 2012 NGREA will improve the on-hand posture of CSS Sustainment equipment. The ARNG will achieve over 90 percent fill for MTRCS, Containerized Kitchens, Assault Kitchens, 5K Light Capacity Rough Terrain Forklifts, Liquid Storage Tanks, and HIPPOs by FY 2016. These systems play a vital role in the ARNG's HD and DSCA missions.

k. CSS Transportation Budget Operating System

Table 2-11. CSS Transportation Budget Operating System

System	Required Quantity (FY 2014)	On-hand Quantity (FY 2014)	Percent Fill	Equipment Shortfall
Semitrailer: Flat Bed: 34 Ton	4,349	3,659	84%	$48.8M
Semitrailer: Low Bed: 25 Ton	748	279	37%	$47.9M
Armored Security Vehicle	1,333	766	57%	$572.5M
Medium Tactical Vehicle	30,388	29,233	96%	$317.0M

The CSS Transportation BOS consists of Light Tactical Vehicles (LTVs), MTVs, Heavy Tactical Vehicles (HTVs), and Tactical Trailers. The HMMWVs are a critical asset in supporting HD and DSCA operations. The HMMWV fleet consists of 35 percent Up-Armored HMMWVs and 33 percent Recapped Legacy. The ongoing Army 2020 Tactical Wheeled Vehicle Reduction Study may reduce the ARNG's overall HMMWV requirements. The ARNG MTV Fleet is projected to be 91 percent FMTV pure by FY 2013, and 51 percent of the fleet will be the most modern up-armored models. The ARNG FMTV fleet modernization level increased from 36 percent in FY 2010 to 63 percent in FY 2012 due to significant Army and ARNG funding investments. The next critical Army decision point in FY 2013 will be to determine a recapitalization or replacement strategy for the first generation FMTVs, which are approaching 15 years of service life.

D. Summary

The ARNG continues its transition from a strategic reserve to an operational force. With the new role as an operational force, it becomes critical for the ARNG to continue modernization efforts. The ARNG will continue to move towards the Army's ARFORGEN-based Equipping Strategy

by increasing interoperability and modernization of equipment. The Army continues to demonstrate a strong commitment to modernize the ARNG. Transparency efforts continue to improve, but additional work is still required to track funds from Congressional appropriation to equipment delivery to the unit for all major systems.

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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. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Air Defense							
Fire Unit Vehicle-mounted: (Avenger)	F57713	$1,090,277	264	264	264	264	264
Radar Set: Sentinel AN/MPQ-64	G92997	$3,500,000	51	59	59	59	78
Air Defense System Integrator: AN/MSQ-214	Z03104	n/d	0	0	0	0	13
Aircraft							
Aerial Scout Helicopter: OH-58D	A21633	$4,075,800	22	25	25	26	30
Airplane Cargo Transport: C-12D	A29812	$1,967,301	8	8	8	8	1
Airplane Cargo Transport: C-23B	A29880	$7,424,158	33	33	33	33	10
Airplane Cargo-Transport: C-12F	A30062	$3,068,422	24	24	24	24	93
Airplane: Cargo-Transport C-26	A46758	$800,000	9	9	9	9	11
Airplane, Cargo Transport	BA108Q	$2,150,000	12	12	12	12	0
CH-47F Improved Cargo Helicopter	C15172	$30,000,000	65	79	95	107	63
Helicopter Advanced Attack: AH-64A	H28647	$10,680,000	1	1	1	1	20
Helicopter Cargo Transport: CH-47D	H30517	$5,000,000	145	145	145	145	102
Helicopter Observation: OH-58C	H31110	$190,817	5	5	5	5	0
Helicopter Light Utility (LUH) UH-72A	H31329	$3,900,000	166	204	214	214	198
Helicopter Utility: UH-60L	H32361	$4,855,000	252	252	252	252	612
Helicopter Utility: UH-60M	H32429	$8,000,000	41	71	84	106	107
Helicopter: Attack AH-64D	H48918	$25,128,800	191	191	191	191	224
Helicopter Observation: OH-58A	K31042	$92,290	79	79	79	79	16
Helicopter Utility: UH-1H	K31795	$922,704	4	4	4	4	5
Helicopter Utility: UH-60A	K32293	$4,635,000	437	437	437	437	39
HH-60M MEDEVAC Helicopter	M33458	$7,800,000	33	45	51	66	45
Tactical Unmanned Aerial Vehicles System: (Shadow)	T09343	$2,000,500	29	29	29	29	29
HH-60L MEDEVAC Helicopter	U84291	$7,908,000	12	12	12	12	0
HH-60Q MEDEVAC Helicopter	U84541	$7,908,000	2	2	2	2	0
Aviation							
Aviators Night Vision Imaging System: AN/AVS-6(V)1	A06352	$10,747	5,592	5,592	5,592	5,592	5,165
Hoist High Performance	H39331	$142,338	227	227	227	227	450
Power Unit Aux: Aviation Multi-Output GTED (AGPU)	P44627	$850,000	158	158	158	158	273
Radar Set: AN/TPN-31	R17126	$3,701,502	13	13	13	13	14
Radio Set: High Frequency AN/ARC-220 (V)1	R22436	$27,779	947	947	947	947	732
Radio Set: High Frequency AN/VRC-100 (V)1	R81691	$33,707	216	216	216	216	260
Shop Equipment Contact Maintenance (SECM): Aviation	S30224	$250,000	3	3	3	3	340
Battle Command and Control (C2)							
Computer Set: AN/UYK-128(V)3	C18378	$15,954	13,269	17,040	17,040	17,049	31,701
Computer Set: Digital OL-582/TYQ	C18446	$5,000	12	12	12	12	0

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Computer Set: Digital OL-604/TYQ	C18684	$14,899	354	354	354	354	756
Computer Set: Digital OL-591/TYQ	C18718	$8,226	1	1	1	1	0
Computer System: Digital AN/TYQ-129(V)1	C27367	$13,000	108	108	108	108	101
Computer System: Digital AN/TYQ-129(V)2	C27435	$3,000	4,605	4,605	4,605	4,605	3,110
Computer System: Digital AN/TYQ-105(V)1	C27503	$2,562	8,829	10,408	10,478	10,478	10,723
Computer System: Digital AN/TYQ-109(V)1	C27707	$5,000	4,246	4,246	4,246	4,246	4,468
Computer System: Digital AN/TYQ-109(V)2	C27775	$7,000	741	741	741	741	712
Central: Communications AN/TSQ-226(V)2	C43331	$1,275,000	2	2	2	2	2
Central: Communications AN/TSQ-226(V)3	C43399	$1,880,000	48	48	48	48	51
Computer Set: Digital OL-603/TYQ	C78827	$14,899	259	259	259	259	326
Computer System: Digital AN/UYQ-90(V)3	C78851	$8,500	1,604	1,604	1,604	1,604	4,000
Digital Topograph System: AN/TYQ-67(V)	D10281	$2,500,000	65	65	65	65	94
Generator Set: DED Skid-mtd 5kW 60Hz	G11966	$12,798	2,318	2,318	2,318	2,318	587
Generator Set: DED Skid-mtd 3kW 60Hz	G18358	$9,922	6,725	6,725	7,105	7,105	7,168
Generator Set: DED TM PU-803	G35851	$38,418	401	405	405	926	504
Generator Set: DED 28V DC MEP-501A	G36169	$6,000	87	87	87	87	63
Generator Set: DED: 60Hz AC MEP-531A	G36237	$6,000	2,471	2,471	2,471	2,471	3,892
Generator Set: DED TM 10kW 60Hz	G40744	$12,102	143	143	143	143	4
Generator Set: DED TM 10kW 60Hz	G42170	$25,757	1,590	1,595	1,596	2,118	1,576
Generator Set: DED TM 5kW 60Hz	G42238	$23,738	1,094	1,094	1,094	1,227	975
Generator Set: DED Trailer-mtd (TM) PU-802	G53778	$31,481	1,097	1,097	1,098	1,298	1,577
Generator Set: DED Skid-mtd 30kW 50/60Hz	G74575	$26,705	109	111	113	113	325
Generator Set: DED Skid-mtd 10kW 60Hz	G74711	$14,345	1,703	1,703	1,703	1,703	1,855
Generator Set: DED TM 60kW 50/60Hz PU805 Chassis	G78306	$44,185	204	206	206	270	278
Generator Set: DED TM 15kW 60Hz	G78374	$32,622	152	153	153	162	229
Generator Set: DED 5kW 60Hz	J35813	$8,332	0	0	0	0	0
Generator Set: DED 10kW 60Hz	J35825	$13,635	357	357	357	357	91
Interrogator Set: AN/TYX-1	J99233	$14,000	1,043	1,043	1,043	1,043	591
Power Plant: Elec DED TM 10kW 60Hz 2ea AN/MJQ-18	P28015	$36,050	27	27	27	27	4
Power Plant: Electric TM 30kW 50/60Hz AN/MJQ-40	P42126	$85,594	100	100	100	108	130
Power Plant: Diesel TM 10kW 60Hz AN/NJQ-37	P42262	$50,294	159	159	159	168	288
Rigid Wall Shelter: Command Post	R98145	$162,800	79	79	79	79	260
Target Acq Subsys: Common Grnd Station AN/TSQ-179(V	T37036	$5,000,000	21	35	35	35	36
Processor Group Signal Data: OL-701/TYQ	Z53098	n/d	0	0	0	0	55
Battle Command Transport Networks							
Battalion Command Post(Switching Group): OM-XXX	B67234	$198,555	145	145	145	145	544
MBITR: Maritime Version	M27045	$12,400	223	223	223	223	230
Radio Set: AN/VSQ-2D(V)1	P49587	$50,011	1,077	1,077	1,077	1,077	7,305
Receiver Transmitter, Radio: RT-1523E(C)/U	R30343	$8,375	26,041	26,041	26,041	26,041	65
Receiver Transmitter: RT-1539(P)A(C)/G	R30434	$94,033	30	30	30	30	0
Receiver-Transmitter, Radio: RT-1523(C)/U	R31609	$8,375	26,795	26,795	26,795	26,795	158
Radio Set: AN/VRC-89F(C)	R44999	$11,128	2,956	3,076	3,105	3,114	5,133
Radio Set: AN/PRC-104A	R55200	$12,000	74	74	74	74	489

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Radio Set: AN/VRC-87F(C)	R67296	$6,532	820	820	820	820	589
Radio Set: AN/VRC-88F(C)	R67330	$7,123	1,144	1,341	1,362	1,362	1,485
Radio Set: AN/VRC-90F(C)	R68044	$7,415	31,599	31,599	31,631	31,652	59,271
Radio Set: AN/VRC-91F(C)	R68146	$11,817	6,172	6,428	6,428	6,428	12,256
Receiver Transmitter, Radio: RT-1523C(C)U	R70839	$8,375	16,023	16,023	16,023	16,023	20
Radio Set: AN/PRC-119F(C)	R83141	$4,346	6,986	6,986	6,986	6,986	9,466
Radio Set: AN/PRC-117F(V)2(C)	R87207	$31,560	372	372	372	372	238
Satellite Communications Terminal AN/TSC-93A	S34963	$825,000	9	9	9	9	4
Satellite Communications Terminal AN/TSC-154	T81733	$825,000	54	55	55	58	142
Joint Node Network (JNN) Central Office Telephone	Z00562	n/d	0	0	0	0	136
Combat Mobility							
Boat Bridge Erection Inboard Engine: Shallow Draft	B25476	$210,000	121	121	121	121	172
Bridge Heavy Dry: Supt (HDSB) 40m MLC96	B26007	$2,676,000	20	25	25	25	22
Bridge Erection Set Fixed Bridge: Hwy Truss Baly Type	C22058	$43,944	7	7	7	7	103
Bridge Erection Set Fixed Bridge: UK Medium Girder Bridge	C22126	$488,354	5	5	5	5	25
Bridge Fixed: Highway Alum UK Medium Girder Bridge 100ft	C22811	$964,515	9	9	9	9	30
Reinforcement Set: Medium-Girder Bridge	C27309	$498,940	5	5	5	5	25
Cradle: Improved Boat (IBC) M14	C33925	$22,064	130	130	130	130	178
Interior Bay Bridge Floating	K97376	$111,968	357	381	391	396	366
Launch M60 Series Tank Chassis Transpt: 40/60ft Bridge	L43664	$527,126	101	101	101	101	111
Launcher Heavy Dry Support Bridge: (HDSB)	L67660	$937,000	24	24	24	24	24
Loader Scoop Type: DED w/5 Cy Gp Bucket (CCE)	L76321	$147,930	45	45	45	45	6
Loader Scoop Type: DSL 2-1/2 cu yd w/Multi Purp Bucket	L76556	$92,895	363	363	363	363	445
Pallet: Bridge Adapter (BAP) M15	P78313	$37,085	447	447	447	447	522
Ramp Bay Bridge Floating	R10527	$134,112	130	130	130	130	152
Tractor Wheeled: DSL w/Excavator & Front Loader	T34437	$110,000	357	357	357	357	91
Transporter Common Bridge	T91308	$226,150	605	605	605	605	688
Tractor FT HS: Armored Combat Earthmover (ACE)	W76473	$887,050	90	90	90	90	120
Field Logistics							
Containerized Kitchen (CK)	C27633	$224,490	309	309	309	309	398
Forward Repair System (FRS)	F64544	$275,000	704	704	704	704	807
Hydraulic System Test and Repair Unit (MX3)	H05002	$80,000	79	79	79	79	0
Fuel System Supply Point: Ptbl 60K-gal	J04717	$30,213	10	10	10	10	13
Kitchen: Company-level Field Feeding	K28601	$31,250	167	167	167	167	614
Refueling System: Aviation HEMMT tanker	R66273	$24,460	144	144	144	144	227
Shop Equip: Contact Maintenance Ord/Eng Truck Mounting	S25681	$75,000	1,700	1,941	1,982	1,983	2,069
Tool Outfit Hydraulic System: Test and Repair 3/4-ton TM	T30377	$91,947	69	69	69	69	431
Load Handling Sys: 2K-gal Comp Water Tank-Rack (HIPPO)	T32629	$131,839	389	471	620	749	660
Truck Lift Fork: DED 50K lb Cont Hdlr Rough Terrain	T48941	$159,138	5	5	5	5	59
Tent: Lightweight Maintenance Enclosure (LME)	T49947	$16,498	1,483	1,483	1,483	1,483	0
SATS Field Maintenance Module 2	T65562	$9,795	43	43	43	43	135
Truck Lift Fork: Variable Reach Rough Terrain	T73347	$166,639	634	651	658	658	833
Maintenance Support Device	T92889	$18,233	12,561	12,562	13,447	14,332	16,231

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Water Storage/Distribution Set: 800K-gal	W37311	$200,508	6	6	6	6	0
Water Purification: Reverse Osmosis 3Kgph TM	W47225	$748,000	65	65	65	65	74
Trailer Tank Water (CAMEL): 800-gal 5-ton	Z36683	n/d	0	0	0	0	322
Force Protection							
Alarm: Chemical Agent Automatic M22	A33020	$10,000	4,559	4,559	4,559	4,559	17,110
Monitor: Chemical Agent	C05701	$7,500	9,130	9,130	9,130	9,130	10,909
Decontaminating Apparatus: Pwr Drvn Lt Wt	D82404	$23,121	53	53	53	53	1,803
Joint Service: Transportable Decontamination	J01197	$25,250	1,677	1,757	1,771	1,771	19
Nuclear, Biological, Chemical (NBC) Recon Vehicle	N96543	$2,320,389	3	27	27	27	107
Radiac Set: AN/PDR-77()	R30993	$4,312	858	858	858	858	1,118
Reconnaissance System NBC: M93A1 FOX	R41282	$3,000,000	4	4	4	4	0
General Engineering							
Crane: Whl-mounted Hydraulic 25-ton All Terrain AT422T	C36586	$313,521	156	156	156	156	176
Distributor Water Tank Type: 6K-gal Semitrailer-mtd (CCE)	D28318	$30,289	82	82	82	82	188
Excavator: Hydraulic (HYEX) Type I	E27792	$236,830	103	123	157	190	149
Excavator: Hydraulic (HYEX) Type II	E41791	$435,755	12	12	12	12	10
Compactor High Speed: Tamping Self-Propelled (CCE)	E61618	$171,438	102	102	102	102	113
Comp Unit RTY: Air TM DED 250cfm 100psi	E72804	$18,507	78	78	78	78	138
Grader Road Motorized: DED Hvy (CCE)	G74783	$98,045	446	446	446	446	492
Excavator Multipurpose TM: Hydraulic Attach A/A	H17945	$298,025	3	3	3	3	58
Fire Fighting Equipment Set: TM Multipurpose	H56391	$151,000	7	7	7	7	35
Grader Road Motorized: DED Sectionalized	J74886	$223,471	8	8	8	8	3
Loader Scoop Type: DED/GED 4-whl 1/2 to 3 cu yd	L76305	$128,900	10	10	10	10	29
Scraper Elevating: Self Propelled 8-11 cu yd non-section	S29971	$162,596	0	0	0	0	46
Scraper Elevating: SP 9-11 cu yd sectionalized	S30039	$324,218	130	130	130	130	92
Scraper Earth Moving: SP 14-18 cu yd (CCE)	S56246	$149,523	367	367	367	367	411
Truck Concrete: Mobile Mixer 8 cu yd (CCE)	T42725	$132,518	12	12	12	12	0
Truck Dump: Road Patching 1-10 ton	T43648	$116,500	2	2	2	2	173
Tractor FT HS: Deployable Lt Engineer (DEUCE)	T76541	$432,799	42	42	42	42	52
Truck: Tactical Firefighting HEMTT	T82180	$640,131	42	113	113	113	39
Tractor FT LS: DSL LGT DBP w/ANGDOZ W/W	W76285	$71,441	1	1	1	1	179
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Winch	W76816	$205,000	474	474	474	474	296
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Ripper	W83529	$245,275	355	355	355	355	85
Tractor FT LS: DSL Hvy DBP w/Buldoz w/Ripper (CCE)	W88699	$197,322	22	22	22	22	0
Tractor Whl: DSL w/Backhoe w/Loader w/Hyd Tool Attach	W91074	$77,230	39	39	39	39	88
Tractor FT LS: T9 Type II w/Ripper	Z01432	n/d	72	94	108	127	216
Maneuver Combat Vehicles							
Anti-Tank Guided Missile Vehicle (ATGM)	A83852	$2,320,389	9	9	9	9	9
Carrier 120mm Mortar: Self Propelled Armored	C10990	$318,308	125	125	125	125	119
Carrier Personnel Full Tracked: Armored (RISE)	C18234	$405,815	911	911	911	911	926
Command Variant Vehicle (CV)	C41314	$2,320,389	27	27	27	27	31
Cavalry Fighting Vehicle: M3	C76335	$1,056,845	2	2	2	2	8
Fighting Vehicle: Full Tracked Infantry Hi Survivability (IFV)	F40375	$1,349,348	421	421	421	421	542

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Fighting Vehicle: Full Tracked Cavalry Hi Survivability (CFV)	F60530	$1,144,000	97	97	97	97	264
Fighting Vehicle: Full Tracked Infantry (IFV) M2A3	F60564	$4,409,064	74	74	74	74	69
Fire Support Vehicle (FSV)	F86821	$2,320,389	13	13	13	13	17
Fighting Vehicle: Full Tracked Cavalry (CFV) M3A3	F90796	$4,021,449	29	30	30	30	30
Infantry Carrier Vehicle (ICV)	J22626	$2,320,389	146	146	146	146	128
Infantry Fighting Vehicle: M2	J81750	$1,061,457	1	1	1	1	5
Engineer Squad Vehicle (ESV)	J97621	$2,320,389	12	12	12	12	12
Medical Evacuation Vehicle (MEV)	M30567	$2,320,389	16	16	16	16	16
M2A2ODS: for Engineers	M31793	$1,311,639	13	13	13	13	91
Mortar Carrier Vehicle (MCV)	M53369	$2,320,389	36	36	36	36	36
Mobile Gun System (MGS)	M57720	$2,320,389	9	9	9	9	27
Recovery Vehicle Full Tracked: Medium	R50681	$1,210,755	299	299	299	299	241
Recovery Vehicle Full Tracked: Heavy M88A2	R50885	$2,748,846	146	146	146	146	136
Reconnaissance Vehicle (RV)	R62673	$2,320,389	51	51	51	51	51
Tank Combat Full Tracked: 120mm Gun	T13168	$2,393,439	506	506	506	506	480
Tank Combat Full Tracked: 120mm Gun M1A2	T13305	$4,445,399	131	131	131	131	87
Tank Combat Full Tracked: 105mm M1 (Abrams)	T13374	$1,645,697	0	0	0	0	2
Maneuver Systems							
Surveillance System: Scout Long Range AN/TAS-8	S02976	$400,000	879	1,074	1,074	1,074	1,011
Target Acquisition System: TOW Improved ITAS M41	T24690	$1,010,000	726	754	754	890	726
Medical Field Systems							
Medical Equipment Set Chemical Agent Patient Treatment	M23673	$53,493	999	1,001	1,001	1,001	900
Medical Equipment Set Ground Ambulance	M26413	$55,629	2,393	2,396	2,396	2,396	1,885
Medical Equipment Set Air Ambulance	M29213	$50,250	417	417	417	417	321
Medical Equipment Set Patient Holding Squad Field LtWt	M29633	$147,517	123	123	123	123	108
Medical Equipment Set Special Forces: Tactical	M29999	$92,758	179	179	179	179	148
Medical Equipment Set Sick Call Field	M30156	$38,949	226	226	226	226	652
Medical Equipment Set Tactical Combat Medical Care	M30499	$130,237	1,125	1,128	1,128	1,128	889
MES Combat Medic	U65480	$4,267	4,624	4,654	4,654	4,654	5,234
Other Systems							
Bridge Fixed: Highway Pony Truss Ptbl Panel Bailey Type	C23017	$303,673	7	7	7	7	102
Soldier Systems							
Monocular Night Vision Device: AN/PVS-14	M79678	$3,607	190,816	191,472	195,199	195,199	36,460
Night Vision Goggles: AN/PVS-5	N04456	$4,300	1,152	1,152	1,152	1,152	35
Night Vision Goggle: AN/PVS-7B	N05482	$6,000	45,700	45,700	45,700	45,700	206,841
Night Vision Device: AN/PSQ-20	N07848	$18,500	953	3,237	5,664	19,132	8,530
Night Vision Sight: Sniperscope AN/PVS-10	S90433	$9,546	412	412	412	412	167
Soldier Weapons							
Machine Gun: 5.56mm M249	M09009	$3,830	28,614	28,628	28,629	28,629	26,051
Machine Gun: 5.56mm M249 Light	M39263	$2,779	5,057	5,057	5,057	5,057	8,283
Rifle: 5.56mm M16A2	R95035	$503	131,656	131,656	131,656	131,656	145,551
Rifle: 7.62mm Sniper M24	R95387	$7,029	468	468	468	468	3,041
Rifle: 5.56mm M16A4	R97175	$950	24,881	24,881	24,881	24,881	3,537

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Rifle: 5.56mm M4	R97234	$1,329	145,909	145,935	145,941	145,956	149,756
Strike							
Radar Set: AN/TPQ-37(V)9	A41666	$14,465,414	8	12	12	12	19
Carrier Ammunition Tracked Vehicle (CATV)	C10908	$1,140,667	270	270	270	270	236
Carrier Cargo: Tracked 6-ton	D11049	$323,416	17	17	17	17	234
Fire Support Team Vehicle: Bradley (BFIST)	F86571	$903,195	35	35	35	35	92
High Mobility Artillery Rocket System (HIMARS)	H53326	$2,500,000	208	208	208	208	198
Howitzer Light Towed: M119	H57505	$1,100,000	325	325	325	325	330
Howitzer Medium Self Propelled	H57642	$1,435,000	293	293	293	293	244
Howitzer Medium Self Propelled: 155mm	K57667	$923,286	3	3	3	3	8
Howitzer Medium Towed: 155mm M198	K57821	$1,032,337	15	15	15	15	15
Launcher Rocket: Armored Vehicle-mounted	L44894	$1,973,897	1	1	1	1	12
Multiple Launch Rocket System: M270A1 Improved Launcher	M82581	$2,168,500	35	35	35	35	32
Radar Set: AN/TPQ-36(V)10	R14284	$10,091,980	32	32	32	32	29
Knight: M707	S50205	$947,000	37	37	37	37	0
Support Systems							
Container Platform: Roll-In/Roll-Out	B83002	$16,633	14,685	14,685	14,685	14,685	18,255
Boat Landing Craft Inflatable: 7-person	B84293	$15,720	298	365	453	499	453
Container Handling Unit (CHU)	C84862	$34,613	131	131	131	131	839
Truck Carryall: 1/4 to 1-1/4 ton 4000-8550 GVW	X42201	$28,000	207	207	207	207	4,871
Trailers							
Semitrailer Tank: 5K-gal Bulk Haul Self-Load/Unload	S10059	$77,550	367	367	367	367	300
Semitrailer Flatbed: Breakbulk/Cont Transporter 22-1/2-ton	S70027	$33,156	3,686	3,686	3,686	3,686	3,375
Semitrailer Flatbed: Breakbulk/Container Transporter 34-ton	S70159	$43,252	3,659	3,659	3,659	3,659	4,349
Semitrailer Low-bed: 40-ton 6-wheel	S70594	$51,900	1,239	1,239	1,239	1,239	1,411
Semitrailer Low-bed: 70-ton Heavy Equip Transporter (HET)	S70859	$229,219	629	629	629	629	690
Semitrailer Tank: 5K-gal Fuel Dispensing Automotive	S73372	$97,413	370	370	370	370	138
Semitrailer Van: Repair Parts Storage 6-ton 4-wheel	S74832	$32,952	33	33	33	33	31
Trailer Flatbed: 11-ton 4-wheel (HEMAT)	T45465	$34,714	1,349	1,349	1,349	1,349	1,244
Trailer: Palletized Loading 8X20	T93761	$46,731	4,655	4,655	4,713	4,802	5,506
Trailer Cargo: MTV W/Dropsides M1095	T95555	$62,829	4,420	4,986	4,986	4,986	5,560
Trailer Cargo: High Mobility 1-1/4-ton	T95924	$8,954	6,537	6,537	6,537	6,537	6,356
Trailer: Light Tactical 3/4-ton	T95992	$8,954	11,619	11,821	11,822	11,823	10,351
Trailer Flatbed: M1082 Trlr Cargo LMTV w/Dropsides	T96564	$34,569	3,599	4,079	4,083	4,083	4,832
Trucks							
Truck Utility: TOW Carrier Armored (HMMWV)	T05096	$49,521	163	163	163	163	603
Truck Utility: Heavy Variant (HMMWV) 10K GVW	T07679	$61,665	12,380	12,380	12,380	12,380	1,030
Truck Utility: ECV Armament Carrier M1151A1	T34704	$210,000	3,431	3,431	3,431	3,431	4,577
Truck Ambulance: 2 Litter Armored (HMMWV)	T38707	$49,357	29	29	29	29	6
Truck Ambulance: 4 Litter Armored (HMMWV)	T38844	$113,998	1,351	1,351	1,351	1,351	1,684
Truck Cargo: Tactical HEMTT w/Lt Crane W/W	T39518	$328,920	74	74	74	74	99
Truck Cargo: Tactical HEMTT w/Med Crane	T39586	$361,629	597	597	597	597	232
Truck Cargo: Tactical HEMTT w/Med Crane W/W	T39654	$373,692	109	109	109	109	41

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Truck Cargo: Heavy PLS Transporter 15-16.5 ton 10X10	T40999	$360,139	1,024	1,024	1,024	1,024	1,594
Truck Cargo: 5-ton 6X6 MTV LAPES/AD	T41036	$118,579	21	21	21	21	89
Truck Cargo: Hvy PLS Transporter 15-16.5 ton w/MHE	T41067	$288,015	590	590	590	590	152
Truck Cargo: 5-ton 6X6 MTV W/W LAPES/AD	T41104	$119,265	12	12	12	12	37
Truck Cargo: MTV W/W	T41135	$182,089	445	445	445	445	77
Truck Cargo: MTV w/MHE	T41203	$218,378	301	301	301	301	428
Truck Cargo: 2 1/2-ton LMTV LAPES/AD	T41995	$103,220	101	101	101	101	139
Truck Tank: Fuel Servicing 2500G HEMTT W/W	T58161	$396,130	410	410	410	410	255
Truck Tractor: Heavy Equipment Transporter (HET)	T59048	$256,704	629	629	629	629	743
Truck Cargo: Tactical HEMTT w/Lt Crane	T59278	$316,920	251	251	251	251	26
Truck Cargo: LMTV	T60081	$176,428	4,508	4,508	4,508	4,508	470
Truck Cargo: LMTV W/W	T60149	$149,600	585	585	585	585	17
Truck Tractor: Line Haul C/S 50000 GVW 6X4 M915	T61103	$162,968	1,611	1,611	1,611	1,611	2,265
Truck Tractor: MTV	T61239	$167,746	1,715	1,715	1,715	1,715	2,644
Truck Tractor: MTV W/W	T61307	$175,733	114	114	114	114	483
Truck Utility: Cargo/Troop Carrier (HMMWV)	T61494	$36,076	11,997	11,997	11,997	11,997	7,021
Truck Utility: Cargo/Troop Carrier W/W (HMMWV)	T61562	$36,672	707	707	707	707	94
Truck Cargo: MTV LWB	T61704	$170,073	74	74	74	74	656
Truck Cargo: MTV LWB W/W	T61772	$119,567	7	7	7	7	0
Truck Cargo: MTV LWB w/MHE W/W	T61840	$209,309	6	6	6	6	0
Truck Cargo: MTV	T61908	$184,333	3,284	3,284	3,284	3,284	466
Truck Wrecker: Tactical HEMTT W/W	T63093	$503,382	675	675	675	675	615
Truck Dump: MTV	T64911	$209,309	27	27	27	27	474
Truck Dump: MTV W/W	T64979	$139,015	0	0	0	0	200
Truck Tank: Fuel Servicing 2500G HEMTT	T87243	$384,130	1,205	1,205	1,205	1,205	695
Truck Tractor: LET 6X6 66000 GVW W/W C/S	T91656	$166,223	1,610	1,610	1,610	1,610	310
Truck Utility: Armt Carrier Armored (HMMWV)	T92242	$74,969	2,874	2,874	2,874	2,874	734
Truck Utility: Armt Carrier Armored W/W (HMMWV)	T92310	$39,518	1,502	1,502	1,502	1,502	642
Truck Utility: ECV Up-Armored (HMMWV)	T92446	$146,844	45	45	45	45	362
Truck Utility: ECV Armored Carrier w/AOA	T92514	$95,548	31	31	31	31	0
Truck Van: LMTV	T93484	$230,363	192	192	192	192	362
Truck Wrecker: MTV W/W	T94709	$331,680	340	340	340	340	745
Truck Cargo: Tactical 8X8 HEMTT w/LHS	T96496	$321,057	870	870	870	870	1,882
Truck Cargo: Dropside 5-ton 6X6	X40794	$74,450	3,545	3,545	3,545	3,545	0
Truck Dump: 5-ton 6X6	X43708	$100,887	914	914	914	914	0
Truck Dump: 20-ton DED 12 cu yd Cap (CCE)	X44403	$211,764	669	674	674	674	602
Truck Tractor: 5-ton 6X6	X59326	$86,203	1,577	1,577	1,577	1,577	0
Truck Wrecker: 5-ton 6X6 W/W	X63299	$168,960	468	468	468	468	0

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aerial Scout Helicopter: OH-58D	A21633	17	
Helicopter Cargo Transport: CH-47D	H30517	22	
Helicopter Observation: OH-58C	H31110	42	
Helicopter Light Utility (LUH) UH-72A	H31329	3	
Helicopter Utility: UH-60L	H32361	21	
Helicopter Utility: UH-60M	H32429	3	
Helicopter: Attack AH-64D	H48918	6	
Helicopter Utility: UH-60A	K32293	30	
Airplane Cargo Transport: C-12D	A29812	29	
Airplane Cargo Transport: C-23B	A29880	15	
Airplane: Cargo-Transport C-26	A46758	16	
Airplane, Cargo Transport	BA108Q	21	
Aviation			
Aviators Night Vision Imaging System: AN/AVS-6(V)1	A06352	9	
Battle Command and Control (C2)			
Computer System: Digital AN/TYQ-109(V)1	C27707	9	
Generator Set: DED Skid-mtd 5kW 60Hz	G11966	9	
Generator Set: DED TM PU-803	G35851	10	
Generator Set: DED: 60Hz AC MEP-531A	G36237	12	
Generator Set: DED TM 10kW 60Hz	G40744	23	
Generator Set: DED TM 10kW 60Hz	G42170	9	
Generator Set: DED TM 5kW 60Hz	G42238	7	
Generator Set: DED Trailer-mtd (TM) PU-802	G53778	7	
Generator Set: DED Skid-mtd 10kW 60Hz	G74711	8	
Generator Set: DED TM 60kW 50/60Hz PU805 Chassis	G78306	14	
Generator Set: DED TM 15kW 60Hz	G78374	9	
Power Plant: Elec DED TM 10kW 60Hz 2ea AN/MJQ-18	P28015	25	
Power Plant: Electric TM 30kW 50/60Hz AN/MJQ-40	P42126	10	
Power Plant: Diesel TM 10kW 60Hz AN/NJQ-37	P42262	14	
Combat Mobility			
Boat Bridge Erection Inboard Engine: Shallow Draft	B25476	21	
Cradle: Improved Boat (IBC) M14	C33925	10	
Interior Bay Bridge Floating	K97376	15	
Launch M60 Series Tank Chassis Transpt: 40/60ft Bridge	L43664	40	
Loader Scoop Type: DED w/5 Cy Gp Bucket (CCE)	L76321	34	
Loader Scoop Type: DSL 2-1/2 cu yd w/Multi Purp Bucket	L76556	28	
Pallet: Bridge Adapter (BAP) M15	P78313	8	

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Ramp Bay Bridge Floating	R10527	18	
Tractor Wheeled: DSL w/Excavator & Front Loader	T34437	23	
Transporter Common Bridge	T91308	12	
Tractor FT HS: Armored Combat Earthmover (ACE)	W76473	21	
Field Logistics			
Containerized Kitchen (CK)	C27633	6	
Truck Lift Fork: DED 50K lb Cont Hdlr Rough Terrain	T48941	30	
Truck Lift Fork: Variable Reach Rough Terrain	T73347	6	
Water Purification: Reverse Osmosis 3Kgph TM	W47225	18	
General Engineering			
Crane: Whl-mounted Hydraulic 25-ton All Terrain AT422T	C36586	12	
Distributor Water Tank Type: 6K-gal Semitrailer-mtd (CCE)	D28318	28	
Excavator: Hydraulic (HYEX) Type I	E27792	14	
Excavator: Hydraulic (HYEX) Type II	E41791	11	
Compactor High Speed: Tamping Self-Propelled (CCE)	E61618	14	
Grader Road Motorized: DED Hvy (CCE)	G74783	28	
Fire Fighting Equipment Set: TM Multipurpose	H56391	28	
Grader Road Motorized: DED Sectionalized	J74886	30	
Scraper Elevating: SP 9-11 cu yd sectionalized	S30039	5	
Scraper Earth Moving: SP 14-18 cu yd (CCE)	S56246	28	
Truck Concrete: Mobile Mixer 8 cu yd (CCE)	T42725	32	
Tractor FT HS: Deployable Lt Engineer (DEUCE)	T76541	11	
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Winch	W76816	33	
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Ripper	W83529	26	
Tractor FT LS: DSL Hvy DBP w/Buldoz w/Ripper (CCE)	W88699	35	
Maneuver Combat Vehicles			
Carrier Personnel Full Tracked: Armored (RISE)	C18234	26	
Cavalry Fighting Vehicle: M3	C76335	28	
Fighting Vehicle: Full Track Infantry Hi Survivability (IFV)	F40375	19	
Fighting Vehicle: Full-Track Cavalry Hi Survivability (CFV)	F60530	23	
Fire Support Vehicle (FSV)	F86821	7	
Infantry Carrier Vehicle (ICV)	J22626	6	
Infantry Fighting Vehicle: M2	J81750	28	
Engineer Squad Vehicle (ESV)	J97621	6	
Mortar Carrier Vehicle (MCV)	M53369	9	
Mobile Gun System (MGS)	M57720	6	
Recovery Vehicle Full Tracked: Medium	R50681	35	
Tank Combat Full Tracked: 120mm Gun	T13168	21	
Tank Combat Full Tracked: 105mm M1 (Abrams)	T13374	28	

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Strike			
Carrier Ammunition Tracked Vehicle (CATV)	C10908	23	
Carrier Cargo: Tracked 6-ton	D11049	43	
Howitzer Light Towed: M119	H57505	5	
Howitzer Medium Self Propelled	H57642	26	
Howitzer Medium Self Propelled: 155mm	K57667	42	
Support Systems			
Container Platform: Roll-In/Roll-Out	B83002	16	
Container Handling Unit (CHU)	C84862	7	
Trailers			
Semitrailer Tank: 5K-gal Bulk Haul Self-Load/Unload	S10059	13	
Semitrailer Flatbed: Breakbulk/Cont Transporter 22-1/2-ton	S70027	19	
Semitrailer Flatbed: Brkbulk/Container Transporter 34-ton	S70159	23	
Semitrailer Low-bed: 40-ton 6-wheel	S70594	23	
Semitrailer Low-bed: 70-ton Hvy Equip Transporter (HET)	S70859	13	
Semitrailer Tank: 5K-gal Fuel Dispensing Automotive	S73372	17	
Semitrailer Van: Repair Parts Storage 6-ton 4-wheel	S74832	39	
Trailer Flatbed: 11-ton 4-wheel (HEMAT)	T45465	12	
Trailer: Palletized Loading 8X20	T93761	7	
Trailer Cargo: MTV W/Dropsides M1095	T95555	3	
Trailer Cargo: High Mobility 1-1/4-ton	T95924	5	
Trailer: Light Tactical 3/4-ton	T95992	4	
Trailer Flatbed: M1082 Trlr Cargo LMTV w/Dropsides	T96564	5	
Trucks			
Truck Utility: TOW Carrier Armored (HMMWV)	T05096	26	
Truck Utility: Heavy Variant (HMMWV) 10K GVW	T07679	14	
Truck Utility: ECV Armament Carrier M1151A1	T34704	4	
Truck Ambulance: 2 Litter Armored (HMMWV)	T38707	24	
Truck Ambulance: 4 Litter Armored (HMMWV)	T38844	23	
Truck Cargo: Tactical HEMTT w/Lt Crane W/W	T39518	25	
Truck Cargo: Tactical HEMTT w/Med Crane	T39586	20	
Truck Cargo: Tactical HEMTT w/Med Crane W/W	T39654	22	
Truck Cargo: Heavy PLS Transporter 15-16.5 ton 10X10	T40999	9	
Truck Cargo: Hvy PLS Transporter 15-16.5 ton w/MHE	T41067	17	
Truck Cargo: MTV W/W	T41135	7	
Truck Cargo: MTV w/MHE	T41203	6	
Truck Tank: Fuel Servicing 2500G HEMTT W/W	T58161	18	
Truck Tractor: Heavy Equipment Transporter (HET)	T59048	14	
Truck Cargo: Tactical HEMTT w/Lt Crane	T59278	24	
Truck Cargo: LMTV	T60081	7	

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Truck Cargo: LMTV W/W	T60149	7	
Truck Tractor: Line Haul C/S 50000 GVW 6X4 M915	T61103	17	
Truck Tractor: MTV	T61239	8	
Truck Tractor: MTV W/W	T61307	7	
Truck Utility: Cargo/Troop Carrier (HMMWV)	T61494	22	
Truck Utility: Cargo/Troop Carrier W/W (HMMWV)	T61562	23	
Truck Cargo: MTV LWB	T61704	7	
Truck Cargo: MTV LWB W/W	T61772	9	
Truck Cargo: MTV	T61908	6	
Truck Wrecker: Tactical HEMTT W/W	T63093	15	
Truck Dump: MTV	T64911	16	
Truck Tank: Fuel Servicing 2500G HEMTT	T87243	15	
Truck Tractor: Let 6X6 66000 GVW W/W C/S	T91656	11	
Truck Utility: Armt Carrier Armored (HMMWV)	T92242	23	
Truck Utility: Armt Carrier Armored W/W (HMMWV)	T92310	23	
Truck Utility: ECV Up-Armored (HMMWV)	T92446	12	
Truck Van: LMTV	T93484	7	
Truck Wrecker: MTV W/W	T94709	7	
Truck Cargo: Tactical 8X8 HEMTT w/LHS	T96496	7	
Truck Dump: 20-ton DED 12 cu yd Cap (CCE)	X44403	20	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016
Aircraft			
RQ-11 (RAVEN)		$10,341,000	$9,610,000
Helicopter, Light Utility (LUH)	$96,227,000		
AH-64 Apache Block IIIA Reman			276,000,000
UH-60 Blackhawk M Model (MYP)	551,241,000	577,586,000	544,568,000
CH-47 Helicopter	198,000,000		
Modification of Aircraft			
Utility/Cargo Airplane Modifications	3,131,000	3,893,000	3,276,000
Utility Helicopter Modifications	42,742,000	56,616,000	
Missiles			
Multiple Launch Rocket System (MLRS) Reduced Range Practice Rockets (RRPR)	8,122,000	8,677,000	8,484,000
Modification of Missiles			
Avenger Modifications			5,140,000
Improved Target Acquisition System (ITAS) / TOW Modifications	6,630,000	20,000,000	13,537,000
MLRS Modifications	2,284,000	14,794,000	848,000
High Mobility Artillery Rocket System (HIMARS) Modifications	2,491,000	2,436,000	2,580,000
Weapons and Tracked Combat Vehicles (WTCV)			
Fire Support Team (FIST) Vehicle (Modifications)	16,478,000	24,714,000	
Howitzer, Medium Self-propelled Full-tracked 155mm M109A6 (Modifications)	1,908,000	19,733,000	17,515,000
Assault Breacher Vehicle		25,152,000	
M88 Family of Vehicles (FOV) Modifications	12,903,000	9,796,000	9,796,000
Joint Assault Bridge			20,700,000
Integrated Air Burst Weapon System Family	17,604,000	17,592,000	17,566,000
Mortar Systems	1,500,000	1,500,000	1,500,000
XM320 Grenade Launcher Module (GLM)	3,606,000	5,368,000	4,480,000
Common Remotely Operated Weapons Station	23,000,000	23,000,000	23,000,000
M777 Howitzer Modifications	6,825,000	2,237,000	
M2 .50 cal Machine Gun Modifications	14,000,000	17,660,000	25,660,000
M119 Howitzer Modifications	7,483,000	26,964,000	26,362,000
Tactical and Support Vehicles			
Tactical Trailers/Dolly Sets	1,850,000	3,111,000	3,887,000
Semitrailers, Flatbed	6,841,000	162,000	108,000
Truck, Dump, 20 ton (CCE)			9,379,000
Family of Medium Tactical Vehicles (FMTV)	150,367,000		
Family of Heavy Tactical Vehicles (FHTV)	5,762,000	3,980,000	8,101,000
Palletized Load System (PLS) Extended Service Program (ESP)		7,016,000	16,900,000

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Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2014	FY 2015	FY 2016
Heavy Expanded Mobile Tactical Truck (HEMTT) ESP		15,305,000	41,584,000
Modification of In-service Equipment	4,404,000	22,645,000	
Communications and Electronics Equipment			
Warfighter Information Network-Tactical (WIN-T) - Ground Forces Tactical Network	161,444,000	49,298,000	383,223,000
Joint Incident Site Communications Capability	7,869,000	8,166,000	5,240,000
Global Broadcast Service (GBS)	26,106,000	14,889,000	
Joint Tactical Radio System	88,483,000	88,483,000	88,483,000
Mid-tier Networking Vehicular Radio (MNVR)		14,963,000	20,925,000
Tactical Communications and Protective System	8,273,000	5,014,000	
Unified Command Suite	18,000,000	18,000,000	17,447,000
Family of Medical Communications for Combat Casualty Care	9,450,000	9,450,000	7,447,000
Telecommunications Security (TSEC) - Army Key Management System (AKMS)		555,000	553,000
Information Systems Security Program (ISSP)	1,415,000	1,698,000	542,000
Communications Security (COMSEC)	2,400,000	2,861,000	2,415,000
Prophet Ground	5,600,000	12,000,000	18,000,000
Distributed Common Ground System - Army (DCGS-A) (MIP)	34,600,000	22,600,000	22,600,000
Counterintelligence (CI) and Human Intelligence (HUMINT) Automated Reporting and Collection System (CHARCS) (MIP)	639,000	665,000	684,000
Lightweight Counter Mortar Radar	14,835,000	13,829,000	11,595,000
Sentinel modifications	21,683,000	34,597,000	5,494,000
Night Vision Devices	52,604,000	94,595,000	131,363,000
Night Vision, Thermal Weapon Sight	3,277,000	32,520,000	19,402,000
Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Range Finder (MLRF)	3,000,000	10,000,000	5,000,000
Green Laser Interdiction System (GLIS)	516,000		
Indirect Fire Protection Family of Systems		18,851,000	20,751,000
Artillery Accuracy Equipment	200,000	1,050,000	650,000
Profiler	2,141,000	1,485,000	1,570,000
Joint Battle Command - Platform (JBC-P)	17,829,000	12,441,000	18,267,000
Joint Effects Targeting System (JETS)		15,000,000	
Modification of In-service Equipment (Lightweight Laser Designator/Rangefinder [LLDR])	7,653,000	16,843,000	19,600,000
Mortar Fire Control System	4,771,000	4,593,000	
Counterfire Radars	149,201,000	270,610,000	155,195,000
Fire Support Command & Control (C2) Family	17,126,000	14,063,000	14,182,000
Battle Command Sustainment Support System (BCS3)	3,201,000		
Forward Area Air Defense (FAAD) C2	2,440,000		
Air & Missile Defense Planning and Control System (AMDPCS)	23,543,000	19,981,000	18,025,000
Network Management Initialization and Service	14,092,000	11,799,000	2,573,000
Maneuver Control System (MCS)	5,458,000	19,846,000	31,686,000
Global Combat Support System - Army (GCSS-A)	20,493,000	45,341,000	41,724,000
Reconnaissance and Surveying Instrument Set	10,901,000	9,030,000	6,648,000

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2014	FY 2015	FY 2016
Items Less Than $5M (Surveying Equipment)	1,615,000	2,177,000	1,719,000
Other Support Equipment			
Family of Non-lethal Equipment (FNLE)	388,000		
Base Defense Systems (BDS)	7,231,000		710,000
CBRN Defense			22,805,000
Tactical Bridging		3,034,000	
Ground Standoff Minefield Detection System (GSTAMIDS)	8,579,000	16,795,000	
Robotic Combat Support System (RCSS)		5,272,000	4,935,000
Explosive Ordnance Disposal (EOD) Equipment	4,184,000	4,141,000	5,060,000
Items Less Than $5M (Countermine Equipment)	339,000	1,112,000	
Heaters and Environmental Control Units (ECUs)	2,064,000	6,884,000	7,279,000
Field Feeding Equipment	10,270,000	9,999,000	9,243,000
Cargo Aerial Delivery & Personnel Parachute System	992,000	2,365,000	5,580,000
Family of Engineer Combat and Construction Sets	16,376,000	16,372,000	15,144,000
Items Less Than $5M (Engineer Support)	1,758,000	1,908,000	1,863,000
Distribution Systems, Petroleum & Water	36,086,000	33,275,000	31,305,000
Combat Support Medical	6,735,000	6,551,000	8,668,000
MEDEVAC Mission Equipment Package (MEP)	22,804,000	2,131,000	4,530,000
Mobile Maintenance Equipment Systems	9,155,000	13,219,000	15,534,000
Items Less Than $5M (Maintenance Equipment)	2,387,000	2,188,000	2,188,000
Scrapers, Earthmoving	17,505,000	13,627,000	9,283,000
Mission Modules - Engineering	9,721,000		
Hydraulic Excavator	26,063,000		
Tractor, Full Tracked	11,531,000	11,402,000	15,461,000
All Terrain Cranes	8,740,000	11,199,000	17,072,000
High Mobility Engineer Excavator (HMEE)	14,840,000		
Enhanced Rapid Airfield Construction Capability (ERACC)	6,642,000	7,182,000	5,787,000
Construction Equipment ESP	7,240,000	6,619,000	6,732,000
Items Less Than $5M (Construction Equipment)	4,103,000	5,976,000	3,457,000
Generators and Associated Equipment	41,183,000	56,212,000	72,645,000
Family of Forklifts	871,000	1,030,000	1,077,000
Training Devices, Nonsystem	26,036,000	22,963,000	28,051,000
Close Combat Tactical Trainer	8,011,000	10,068,000	9,276,000
Aviation Combined Arms Tactical Trainer	8,496,000	8,147,000	8,724,000
Gaming Technology in Support of Army Training	4,969,000	4,700,000	3,250,000
Calibration Sets Equipment	1,952,000	1,865,000	1,861,000
Integrated Family of Test Equipment (IFTE)	25,343,000	23,465,000	28,685,000
Test Equipment Modernization (TEMOD)	6,565,000	8,773,000	11,541,000
Modification of In-service Equipment (OPA-3)	2,655,000	3,799,000	2,895,000
Total	**$2,288,071,000**	**$2,139,844,000**	**$2,524,225,000**

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013
FY 2011 Title IX NGREA Equipment			
Battle Command (Standard Integrated Command Posts, Global Broadcast System)	$78,073,492		
Aviation (FLIR Star Imaging System, Ground Support Equipment, Rescue Hoist, LUH MEP)	58,980,480		
Engineering Equipment (Light Loader, Low Speed Bulldozer)	38,506,000		
Force Protection (Chemical Detection, Decontamination Trailer)	35,306,257		
Training Aids, Devices, and Simulators (Mine Resistant Ambush Protected Vehicle Virtual Trainer, Shadow Crew Trainer, Vehicle Convoy Operations Trainer Upgrade, Operator Driver Simulator)	30,932,981		
Tactical Power Generation/Distribution (PDISE Generators)	8,199,240		
FY 2012 Title IX NGREA Equipment			
Training Systems (Simulators, Training Systems)		$123,364,467	
Engineer (General Engineering Equipment)		56,342,645	
Domestic Operations (Chemical/Radiation Detection, Decontamination Systems)		45,887,941	
Aviation (Support Equipment, Imaging Systems, Unmanned Aerial Systems, Fuel Tanks, Light Utility Helicopters)		37,357,827	
Medical (Field Medical, Medical Equipment Sets)		36,980,154	
Logistics (Field Feeding, Field Services, Liguid Logistics, Test and Measurement Support Devices)		25,066,300	
Total	**$249,998,450**	**$324,999,333**	

1. Service FY 2013 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2013 will be provided in next year's NGRER.

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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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Air Defense					
Radar Set: Sentinel AN/MPQ-64	G92997	+1			
Aircraft					
Helicopter Light Utility (LUH) UH-72A	H31329	+5			
Helicopter Utility: UH-60L	H32361	+6			
Helicopter Utility: UH-60M	H32429	+23			
Helicopter Utility: UH-60A	K32293	+1			
HH-60M MEDEVAC Helicopter	M33458	+12			
Aerial Scout Helicopter: OH-58D	A21633	+3			
Battle Command and Control (C2)					
Computer Set: AN/UYK-128(V)3	C18378	+1,518		+9	
Rigid Wall Shelter: Command Post	R98145	+55			
Computer System: Digital AN/TYQ-105(V)1	C27503	+1,579	+70		
Generator Set: DED TM PU-803	G35851	+6			
Generator Set: DED Skid-mtd 30kW 50/60Hz	G74575		+2		
Power Plant: Electric TM 30kW 50/60Hz AN/MJQ-40	P42126			+1	
Generator Set: DED TM 10kW 60Hz	G42170	+5	+1		
Generator Set: DED Trailer-mtd (TM) PU-802	G53778		+1		
Generator Set: DED TM 15kW 60Hz	G78374	+1			
Battle Command Transport Networks					
Radio Set: AN/VRC-88F(C)	R67330	+22	+3		
Radio Set: AN/VRC-90F(C)	R68044		+18	+21	
Radio Set: AN/PRC-119F(C)	R83141	+165	+17		
Radio Set: AN/VRC-89F(C)	R44999	+300	+29	+9	
Radio Set: AN/VRC-91F(C)	R68146	+76			
Combat Mobility					
Interior Bay Bridge Floating	K97376			+5	
Field Logistics					
Load Handling Sys: 2K-gal Comp Water Tank-Rack (HIPPO)	T32629	+107			
Shop Equip: Contact Maintenance Ord/Eng Truck Mounting	S25681	+148	+41	+1	
Truck Lift Fork: Variable Reach Rough Terrain	T73347	+14	+7		
Force Protection					
Decontaminating Apparatus: Pwr Drvn Lt Wt	D82404	+78	+14		
Joint Service: Transportable Decontamination	J01197	+2			
Alarm: Chemical Agent Automatic M22	A33020	+290			
Monitor: Chemical Agent	C05701	+320			

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Table 5

Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Nuclear, Biological, Chemical (NBC) Recon Vehicle	N96543	+7			
General Engineering					
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Winch	W76816	+1			
Excavator: Hydraulic (HYEX) Type I	E27792	+12			
Distributor Water Tank Type: 6K-gal Semitrailer-mtd (CCE)	D28318	+7			
Maneuver Combat Vehicles					
Fighting Vehicle: Full Tracked Cavalry (CFV) M3A3	F90796	+1			
Surveillance System: Scout Long Range AN/TAS-8	S02976	+89			
Medical Field Systems					
Medical Equipment Set Chemical Agent Patient Treatment	M23673	+2			
Medical Equipment Set Ground Ambulance	M26413	+3			
Medical Equipment Set Tactical Combat Medical Care	M30499	+3			
MES Combat Medic	U65480	+30			
Soldier Systems					
Monocular Night Vision Device: AN/PVS-14	M79678		+84		
Night Vision Goggles: AN/PVS-5	N04456	+30			
Night Vision Goggle: AN/PVS-7B	N05482	+675	+3,643		
Nigt Visioin Device: AN/PSQ-20	N07848		+59		
Soldier Weapons					
Machine Gun: 5.56mm M249	M09009	+11			
Machine Gun: 5.56mm M249 Light	M39263	+3	+1		
Rifle: 5.56mm M16A2	R95035	+26	+6	+15	
Strike					
Fire Support Team Vehicle: Bradley (BFIST)	F86571	+11			
Radar Set: AN/TPQ-37(V)9	A41666	+4			
Trailers					
Trailer: Light Tactical 3/4-ton	T95992	+6	+1	+1	
Trailer Flatbed: M1082 Trlr Cargo LMTV w/Dropsides	T96564		+4		
Trucks					
Truck Dump: 20-ton DED 12 cu yd Cap (CCE)	X44403	+5			

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2010 Planned Transfers & Withdrawals							
ARNG indicated no planned transfers or withdrawals in the FY 2010 NGRER.							
FY 2010 P-1R Equipment							
Aircraft							
Helicopter, Light Utility (LUH)				$186,285,000	$180,574,000		
UH-60 Blackhawk (MYP)				182,400,000	182,400,000		
Global Air Traffic Management (GATM) Rollup				0	3,808,000		
Common Ground Equipment				18,355,000	0		
Utility/Cargo Airplane Modifications				0	526,000		
Utility Helicopter Modifications				0	27,816,000		
Other Missiles							
Javelin (AAWS-M) System Summary				98,065,000	535,000		
High Mobility Artillery Rocket System (HIMARS)				118,627,000	118,627,000		
HIMARS Modifications				0	31,838,000		
ITAS/TOW Modifications				0	6,800,000		
Tracked Combat Vehicles							
Stryker Vehicle				179,789,000	0		
Bradley Program (Modifications)				0	182,518,000		
Improved Recovery Vehicle (M88A2 Hercules) (Mod)				9,608,000	10,108,000		
Armored Breacher Vehicle (Modifications)				35,860,000	0		
Joint Assault Bridge (Modifications)				19,800,000	19,800,000		
M1 Abrams Tank (Modifications)				19,800,000	74,000,000		
Weapons and Other Combat Vehicles							
Howitzer, Light, Towed, 105mm, M119				55,951,000	55,656,000		
M240 Medium Machine Gun (7.62mm)				14,498,000	11,773,000		
Machine Gun, Cal .50 M2 Roll				2,256,000	2,256,000		
Mk-19 Grenade Machine Gun (40mm)				3,533,000	0		
Mortar Systems				4,690,000	4,690,000		
XM320 Grenade Launcher Module (GLM)				0	1,179,000		
M4 Carbine				9,966,000	3,568,000		
Howitzer Lightweight 155mm (Towed)				45,890,000	45,890,000		
M249 SAW Machine Gun Modifications				0	77,000		
Tactical Vehicles							
Tactical Trailers/Dolly Sets				27,993,000	3,000,000		
Semitrailers, Flatbed				4,566,000	14,300,000		
High Mobility Multipurpose Wheeled Vehicle (HMMWV)				164,460,000	357,251,000		
Family of Medium Tactical Vehicles (FMTV)				507,867,000	753,275,000		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Family of Heavy Tactical Vehicles (FHTV)				304,643,000	363,470,000		
Armored Security Vehicles (ASV)				103,501,000	102,747,000		
Mine Protection Vehicle Family				52,463,000	34,842,000		
Truck, Tractor, Line Haul, M915/M916				20,456,000	36,028,000		
HEMTT Extended Service Program (ESP)				45,395,000	43,669,000		
Communications and Electronics Equipment							
WIN-T - Ground Forces Tactical Network				8,860,000	22,360,000		
NAVSTAR Global Positioning System (Space)				52,955,000	57,279,000		
SMART-T (Space)				3,235,000	16,200,000		
Global Broadcast Service (GBS)				0	2,962,000		
SINCGARS Family				6,812,000	2,991,000		
Spider Apla Remote Control Unit				0	8,959,000		
Radio, Improved HF (COTS) Family				3,755,000	0		
Medical Communications for Combat Casualty Care (MC4)				2,681,000	2,690,000		
TSEC - Army Key Management System (AKMS)				9,300,000	9,300,000		
Information System Security Program (ISSP)				452,000	2,494,000		
Prophet Ground (MIP)				18,381,000	0		
Distributed Common Ground System - Army (DCGS-A)				17,035,000	16,972,000		
Lightweight Counter Mortar Radar				16,000	5,040,000		
Sentinel Modifications				0	13,214,000		
Night Vision Devices				177,057,000	13,843,000		
Long Range Advanced Scout Surveillance System				75,494,000	75,494,000		
Night Vision, Thermal Weapon Sight				90,561,000	103,064,000		
Profiler				2,094,000	2,094,000		
Force XXI Battle Cmd Brigade & Below (FBCB2)				81,550,000	81,550,000		
Lightweight Laser Designator/Rangefinder (LLDR)				28,216,000	34,800,000		
Tactical Operations Centers				26,282,000	18,500,000		
Fire Support C2 Family				4,499,000	8,248,000		
Battle Command Sustainment Support System (BCS3)				0	1,874,000		
Air & Missile Defense Planning & Control System (AMD PCS)				36,686,000	5,211,000		
Knight Family				40,200,000	58,700,000		
TC AIMS II				5,338,000	0		
Maneuver Control System (MCS)				16,049,000	16,049,000		
Single Army Logistics Enterprise (SALE)				7,317,000	0		
CSS Communications				19,127,000	24,027,000		
Other Support Equipment							
Protective Systems				0	19,067,000		
CBRN Soldier Protection				21,216,000	23,659,000		
Tactical Bridging				21,338,000	30,797,000		
Tactical Bridge, Float-ribbon				68,928,000	74,103,000		
Handheld Standoff Minefield Detection System (HSTAMIDS)				0	16,613,000		
Explosive Ordnance Disposal (EOD) Equipment				17,002,000	0		
Heaters and Environmental Control Units (ECUs)				0	2,732,000		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Soldier Enhancement				4,071,000	0		
Field Feeding Equipment				10,655,000	11,462,000		
Cargo Aerial Delivery & Personnel Parachute System				4,555,000	4,555,000		
Distribution Systems, Petroleum & Water				20,910,000	20,906,000		
Water Purification Systems				5,125,000	5,125,000		
Combat Support Medical				2,231,000	2,367,000		
Mobile Maintenance Equipment Systems				62,654,000	62,770,000		
Skid Steer Loader (SSL) Family of Systems				0	9,000,000		
Loaders				8,420,000	8,420,000		
Tractor, Full Tracked				6,400,000	6,400,000		
Plant, Asphalt Mixing				0	15,375,000		
High Mobility Engineer Excavator (HMEE) FOS				6,450,000	6,450,000		
Construction Equipment ESP				0	2,966,000		
Generators and Associated Equipment				51,179,000	62,656,000		
Rough Terrain Container Handler (RTCH)				11,394,000	12,723,000		
All Terrain Lifting Army System				16,996,000	22,233,000		
Integrated Family of Test Equipment (IFTE)				25,532,000	27,210,000		
Test Equipment Modernization (TEMOD)				0	7,103,000		
FY 2010 Title III NGREA Equipment							
Medical Support Equipment (ex: Ambulances)						$165,578,160	$165,578,160
Family of Medium Tactical Vehicles (FMTV)						109,295,298	220,471,720
Light Utility Helicopter Mission Enhancement Program (LUH MEP)						59,344,282	50,432,000
Automated Battle Command Training Simulators						47,157,720	0
Digital Enablers (ex: Digital Computer System - AN/PYQ-6C, Interface Unit Communications Equip)						42,106,439	0
Training Aids, Devices, Simulators, and Simulations Operations Trainer						38,738,895	36,862,256
Civil Support Team (CST) (ex: Therm Desorption Sys for Gas Chromatograph Mass Spectrometer)						13,470,000	13,470,000
Wideband Global (Gapfiller) System (WGS)						12,960,000	0
General Engineering Equipment (ex: Tractor, 15-Man Inflatable Assault Boat)						12,653,832	56,391,726
Soldier Weapons/Systems (ex: Battlefield Anti-intrusion System - AN/PRS-9)						11,842,751	0
Network Communications Security (ex: Secure VTC to BN/BDE)						11,150,000	22,480,000
Chemical Decontamination Equipment (ex: CERFP Mass Casualty Decontamination Trailer)						10,231,300	3,888,800
Shadow Crew Trainer (Unmanned Aerial Vehicle)						8,656,154	4,760,000
Field Logistics Equipment (ex: Prefabricated Refrigerator, Wheeled Crane)						7,180,443	0
Liquid Logistics Storage and Distribution (ex: 2000 gal Water Tank [HIPPO])						6,085,899	0
Integrated Vehicle Health and Usage Monitoring System (IVHUMS)						4,368,000	0
Field Maintenance Equipment (ex: Test Facilities Kit - MK-994/AR)						3,556,828	0
Blackhawk Maintenance Trainer						3,000,000	0
Aviation Support Equipment (ex: High Performance Hoist)						2,608,661	0
Interim MEDEVAC Mission Support System (IMMSS)						2,200,000	0
Tactical Radios (ex: High Frequency Radio Set - AN/VRC-100(V)1)						2,150,000	0
Tactical Trailers						664,723	664,723
Total				**$3,335,725,000**	**$3,731,628,000**	**$574,999,385**	**$574,999,385**

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Table 7

Major Item of Equipment Substitution List

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

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No
Aircraft						
Helicopter Observation: OH-58C	H31110	Helicopter Observation: OH-58A	K31042	64	X	
Helicopter Utility: UH-60L	H32361	Helicopter Utility: UH-60A	K32293	229	X	
Aviation Maintenance						
Electronic Shop Shelter Avionics: AN/ASM-146	H01907	Electronic Shop: Semitrailer-mtd AN/ASM-189	H01855	64	X	
Battle Command and Control						
Computer System: AN/TYQ-109(V)2	C27775	Computer System: AN/TYQ-109(V)1	C27707	495	X	
Gen Set: DED Skid-mtd 3kW 60Hz	G18358	Gen Set: DED Skid-mtd 5kW 60Hz	G11966	151	X	
Gen Set: DED Skid-mtd 3kW 60Hz	G18358	Gen Set: DED: 60Hz AC MEP-531A	G36237	204	X	
Gen Set: DED TM PU-803	G35851	Gen Set: DED 30kW 60Hz PU-406	J36383	48	X	
Gen Set: DED TM 10kW 60Hz	G42170	Gen Set: DED TM 10kW 60Hz	G40744	89	X	
Gen Set: DED TM 5kW 60Hz	G42238	Gen Set: DED 5kW 60Hz PU-751/M	G37273	7	X	
Gen Set: DED Trailer-mtd (TM) PU-802	G53778	Gen Set: DED 15kW 60Hz PU-405	J35492	164	X	
Gen Set: DED Trailer-mtd (TM) PU-802	G53778	Gen Set: DED 30kW 60Hz PU-406	J36383	59	X	
Gen Set: DED Skid-mtd 10kW 60Hz	G74711	Gen Set: DED 10kW 60Hz	J35825	187	X	
Nav Set: Satellite Signals AN/PSN-13	N96248	Nav Set: Satellite Systems	N95862	948	X	
Power Plant: 10kW 60Hz AN/NJQ-37	P42262	Power Plant: 10kW 60Hz AN/MJQ-18	P28015	4	X	
Battle Command Transport Networks						
Radio Set: AN/VRC-92F(C)	R45543	Radio Set: AN/VRC-92A	R45407	1,625		X
Radio Set: AN/VRC-92F(C)	R45543	Radio Set: AN/VRC-92D	R45475	957	X	
Radio Set: AN/VRC-87F(C)	R67296	Radio Set: AN/VRC-87C	R00845	2	X	
Radio Set: AN/VRC-87F(C)	R67296	Radio Set: AN/VRC-87A	R67160	143	X	
Radio Set: AN/VRC-87F(C)	R67296	Radio Set: AN/VRC-87D	R67228	25	X	
Radio Set: AN/VRC-88F(C)	R67330	Radio Set: AN/VRC-88A	R67194	757		X
Radio Set: AN/VRC-88F(C)	R67330	Radio Set: AN/VRC-88D	R67262	235	X	
Radio Set: AN/VRC-90F(C)	R68044	Radio Set: AN/VRC-90A	R67908	12,480		X
Radio Set: AN/VRC-90F(C)	R68044	Radio Set: AN/VRC-90D	R67976	5,466	X	
Radio Set: AN/VRC-91F(C)	R68146	Radio Set: AN/VRC-91A	R68010	3,409		X
Radio Set: AN/VRC-91F(C)	R68146	Radio Set: AN/VRC-91D	R68078	1,162	X	
Radio Set: AN/PRC-119F(C)	R83141	Radio Set: AN/PRC-119A	R83005	1,203	X	
Radio Set: AN/PRC-119F(C)	R83141	Radio Set: AN/PRC-119D	R83073	467	X	
Combat Mobility						
Tractor Wheeled: DSL w/Excavator & Front Loader	T34437	Tractor Whl: DSL w/Backhoe w/Loader w/Hyd Tool Attach	W91074	5	X	
Field Logistics						
Containerized Kitchen (CK)	C27633	Kitchen Field, Trailer-mtd	L28351	100	X	

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Table 7

Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No
Truck Lift Fork: Variable Reach Rough Terrain (RT)	T73347	Truck Lift Fork: DED Variable Reach 6K-lb RT Ammo Hdlg	T48944	105	X	
Truck Lift Fork: Variable Reach RT	T73347	Truck Lift Fork: DED 10K-lb RT	T49119	25	X	
Truck Lift Fork: Variable Reach RT	T73347	Truck Lift Fork: DED 6K-lb RT	X48914	3	X	
Truck Lift Fork: Variable Reach RT	T73347	Truck Lift Fork: DED 10K-lb RT	X49051	1	X	
Maintenance Support Device	T92889	Test Set Elect Systems: AN/PSM-80(V)2	T77499	5	X	
Force Protection						
Alarm: Chemical Agent Automatic M22	A33020	Alarm: Chemical Agent Automatic M8A1	A32355	4,058	X	
Decon Apparatus: Pwr Drvn Lt Wt	D82404	Decon Apparatus: Pwr Drvn Skid-mtd	F81880	5	X	
Decon Apparatus: Pwr Drvn Lt Wt	D82404	Joint Service: Transportable Decon	J01197	1,365	X	
Radiac Set: AN/UDR-13	R31061	Radiacmeter: IM-93/UD	Q20935	992	X	
Soldier Systems						
Mini Eyesafe Laser IR Observation Set (MELIOS): AN/PVS-6	M74849	Target Locator Module	T27471	647		
Night Vision Goggle: AN/PVS-7B	N05482	Mono Night Vision Device: AN/PVS-14	M79678	129,413	X	
Night Vision Goggle: AN/PVS-7B	N05482	Night Vision Goggles: AN/PVS-5	N04456	553		X
Thermal Sight AN/PAS-13B(V)1	S60356	Night Vision Sight: AN/PVS-4	N04732	883	X	
Medium Weapon Thermal Sight (MWTS): AN/PAS-13(V)2	S90535	Night Vision Sight: AN/TVS-5	N04596	140	X	
Soldier Weapons						
Machine Gun: 5.56mm M249 Light	M39263	Machine Gun: 5.56mm M249	M09009	2,286	X	
Strike						
Fire Support Team Vehicle: Bradley (BFIST)	F86571	Carrier Personnel FT Fire Support	C12155	13	X	
Range Finder-Target Designator: Laser AN/PED-1	R60282	Target Designator Set: EO (GLLD)	T26457	49	X	
Trailers						
Trailer: Light Tactical 3/4-ton	T95992	Trailer Cargo: High Mobility 1-1/4-ton	T95924	545	X	
Trucks						
Truck Cargo: Tactical HEMTT w/Lt Crane W/W	T39518	Truck Cargo: Tactical HEMTT w/Med Crane	T39586	102	X	
Truck Cargo: Tactical HEMTT w/Lt Crane W/W	T39518	Truck Cargo: Tactical HEMTT w/Lt Crane	T59278	49	X	
Truck Cargo: Tactical HEMTT w/Lt Crane W/W	T39518	Truck Cargo: M977A4	T59532	80	X	
Truck Cargo: Tactical HEMTT w/Med Crane W/W	T39654	Truck Cargo: Tactical HEMTT w/Med Crane	T39586	64	X	
Truck Cargo: Tactical HEMTT w/Med Crane W/W	T39654	Truck Cargo: M985A4	T59380	96	X	
Truck Cargo: Heavy PLS Transporter 15-16.5 ton 10X10	T40999	Truck Cargo: Hvy PLS Transporter 15-16.5-ton w/MHE	T41067	299	X	
Truck Cargo: Heavy PLS Transporter 15-16.5 ton 10X10	T40999	Truck: Palletized Loading	T81874	30	X	
Truck Cargo: 5-ton MTV LAPES/AD	T41036	Truck Cargo: Dropside 5-ton 6X6	X40794	4	X	
Truck Cargo: 5-ton MTV W/W LAPES/AD	T41104	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	3		X

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Table 7

Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No
Truck Cargo: MTV W/W	T41135	Truck Cargo: 5-ton W/W	T41447	63	X	
Truck Cargo: MTV W/W	T41135	Truck Cargo: 5-ton WO/W	T41515	194	X	
Truck Cargo: MTV W/W	T41135	Truck Cargo: Dropside 5-ton 6X6	X40794	21,277	X	
Truck Cargo: MTV W/W	T41135	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	152		X
Truck Cargo: LMTV	T60081	Truck Cargo: LMTV LAPES/AD	T41995	7	X	
Truck Cargo: LMTV	T60081	Truck Cargo: LMTV W/W LAPES/AD	T42063	2	X	
Truck Cargo: LMTV	T60081	Truck Cargo: 2.5-ton W/W	T42131	165	X	
Truck Cargo: LMTV	T60081	Truck Cargo: WO/W	T59448	2,222	X	
Truck Cargo: LMTV	T60081	Truck Cargo: Dropside 5-ton 6X6	X40794	724	X	
Truck Cargo: LMTV W/W	T60149	Truck Cargo: 2.5-ton W/W	T42131	171	X	
Truck Cargo: LMTV W/W	T60149	Truck Cargo: WO/W	T59448	54	X	
Truck Cargo: LMTV W/W	T60149	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	40		X
Truck Tractor: MTV	T61239	Truck Tractor: WO/W	T88983	527	X	
Truck Tractor: MTV	T61239	Truck Tractor: 5-ton 6X6	X59326	1,018	X	
Truck Tractor: MTV W/W	T61307	Truck Tractor: 5-ton 6X6 W/W	X59463	65	X	
HMMWV: Cargo/Troop Carrier	T61494	HMMWV: Utility Hvy Variant 10K GVW	T07679	6,533	X	
HMMWV: Cargo/Troop Carrier	T61494	HMMWV: ECV M1152	T11588	34	X	
HMMWV: Cargo/Troop Carrier	T61494	HMMWV: ECV M1152A1	T37588	1,433	X	
HMMWV: Cargo/Troop Carrier	T61494	HMMWV: ECV M1165	T38873	94	X	
HMMWV: Cargo/Troop Carrier	T61494	HMMWV: ECV M1165A1	T56383	6,589	X	
HMMWV: Cargo/Troop Carrier	T61494	HMMWV: Cargo/Troop Carrier W/W	T61562	287	X	
HMMWV: Cargo/Troop Carrier, M1113	T61630	HMMWV: Heavy Variant 10K GVW	T07679	855	X	
Truck Cargo: MTV LWB	T61704	Truck Cargo: MTV LWB W/W	T61772	3	X	
Truck Cargo: MTV LWB	T61704	Truck Cargo: LWB WO/W	T93271	452	X	
Truck Cargo: MTV LWB	T61704	Truck Cargo: 5-ton 6X6 XLWB	X41105	11	X	
Truck Cargo: MTV LWB	T61704	Truck Cargo: 5-ton 6X6 XLWB W/W	X41242	5	X	
Truck Cargo: MTV	T61908	Truck Cargo: 5-ton WO/W	T41515	1,461	X	
Truck Cargo: MTV	T61908	Truck Cargo: Dropside 5-ton 6X6	X40794	1,143	X	
Truck Cargo: MTV	T61908	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	196		X
Truck Dump: MTV	T64911	Truck Dump: 10-ton WO/W	T65342	437	X	
Truck Dump: MTV	T64911	Truck Dump: 5-ton 6X6	X43708	373	X	
Truck Dump: MTV	T64911	Truck Dump: 5-ton 6X6 W/W	X43845	16	X	
Truck Dump: MTV W/W	T64979	Truck Dump: 5-ton 6X6	X43708	84	X	
Truck Dump: MTV W/W	T64979	Truck Dump: 5-ton 6X6 W/W	X43845	14	X	
Truck Dump: FMTV 10-ton	T65047	Truck Dump: 10-ton WO/W	T65342	77	X	
Truck Dump: FMTV 10-ton: M1157	T65115	Truck Dump: 10-ton W/W	T65274	41	X	
Truck Dump: 5-ton MTV LAPES/AD	T65526	Truck Dump: 5-ton 6X6	X43708	2	X	
HEMTT Tank: Fuel Servicing 2500G	T87243	HEMTT Tank: Fuel Serv 2500G W/W	T58161	129	X	
HEMTT Tank: Fuel Servicing 2500G	T87243	Truck Tank: WO/W	T58318	672	X	

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Table 8

Significant Major Item Shortages

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

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	Rotary-Medium Cargo (H-60 Family) Modernization	831	0	varies	$14,190,624,000	The UH/HH-60L and UH/HH-60M replace the UH-60A and are CDU items. H-60As are being modernized by the procurement of H-60Ms, cascades of UH-60Ls, and the A-A-L conversion line. Equipment on-hand with substitutes will be 100%, but the projected "get well date" for H-60 modernization is FY 2023-2027. Shortfall cost is the cost to modernize legacy H-60As to H-60L/Ms.
2	General Engineering Equipment	14,714	2,297	varies	$312,436,412	This category includes firefighting, support, and construction equipment critically under-filled or past its useful life cycle. Much of this cost is tied to modernization, not Equipment on-hand (EOH).
3	Chemical and Biological Protective Shelter (CBPS) M8E1	285	251	$1,000,000	$251,000,000	The NBC Force Protection Budget Operating System (BOS) consists of systems to support chemical, biological, radiological, and nuclear activities. Production of the MTV-based CBPS System is scheduled to begin 1st quarter of FY 2013. Deliveries of 16 systems for ARNG are slated for FY 2015. The ARNG plans to use NGREA to supplement Army base-budget funding for CBPS and to extend MTV platform contract beyond FY 2014.
4	Semitrailer: Low-bed, 25-ton	783	469	$102,222	$47,942,118	Fills unit requirements and replaces legacy 25-ton Trailers that require recapitalization or replacement.
5	Medical Field Systems	14,781	1,824	varies	$41,952,000	The Medical Field Systems are a grouping of 99 line items of equipment, to include blood analyzers, defibrillators, ventilators, patient monitors, X-ray and imaging systems, and various medical and dental equipment sets. This equipment is necessary for medical personnel to provide life-saving emergency medical treatment. These sets are reviewed by the U.S. Army Medical Materiel Agency (USAMMA) every three years to determine the type and quantity of components to be added or removed from the unit assemblages.
6	Semitrailer: Flatbed, 34-ton	4,349	690	$70,787	$48,843,030	Fills unit requirements and replaces legacy 34-ton Trailers that require recapitalization or replacement.
7	Combat Mobility	20,287	711	varies	$1,847,665,976	This category includes dozers, countermine, and bridging systems. Dozers and bridging support CDU requirements. Much of this cost is tied to modernization, not EOH.

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Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
8	Medical Communications for Combat Casualty Care (MC4)	16,407	5,251	varies	$26,255,000	The MC4 system is composed of seven Army-approved line items of medical communications tools used by medical personnel to read and record medical information of soldiers receiving medical care. This equipment allows medical personnel access to the personal medical baseline information of patients in their care, enhances medical readiness and provides a comprehensive lifelong electronic medical record for all service members. The MC4 has multiple models that provide medical information management of the patient's health and provision of their health care. The Army Medical Department (AMEDD) historically did not have an effective method of linking health care providers and diagnostic systems prior to the fielding of MC4.
9	LLDR (Lightweight Laser Designator Rangefinder) Family of Line Items	1,091	227	varies	$69,764,682	This category includes a family of devices that enable the Soldier to accurately locate and designate targets for engagement with precision munitions. In addition to initial procurement, this family funds three rounds of system modernization.
10	Multi-Temperature Refrigerated Container System (MTRCS)	1,323	1,020	$113,188	$115,451,760	The MTRCS replaces non-tactical legacy Reefer Vans. The MTRCS provides the capability to refrigerate and/or freeze perishable and semi-perishable food and medical supplies with dual evaporators and a moveable partition allowing division into two compartments.

* Item quantities and costs in this table are projected FY 2017 values.

III. Army Reserve Overview

A. Current Status of the Army Reserve

1. General Operational Overview

Top Army Reserve Focus Areas

- Resource, modernize, and sustain critical equipment, infrastructure, and automation systems that maintain the Army Reserve as part of an operational force
- Increase simulation investment and utilization at Home Station Training
- Anticipate an expanded role in homeland defense (HD) and defense support of civil authorities (DSCA) (Critical Dual Use equipment)

The operational Army Reserve is a critical component in our Nation's defense. Enhanced by civilian skill sets that serve as a force multiplier, the Army Reserve delivers vital military capabilities essential to the Total Force. Under Title 10 of the U.S. Code, the Army Reserve mission is to provide trained, equipped, and ready Soldiers and cohesive units to meet the global requirements across the full spectrum of operations. As such, equipping the Reserve to continuously support the Army and joint force missions at home and abroad is paramount.

a. Status of Forces as an Operational Reserve

The Army Reserve (AR) holds a significant portion of the Army's total combat support (CS) and combat service support (CSS) enablers for expeditionary missions such as peace-keeping and theater security cooperation. Reserve formations are ideally suited to conduct these missions. In this role, units and individuals train and are available for missions in accordance with the national defense strategy. This force provides strategic depth and is available to transition to operational roles whenever needed. Properly sustaining the Army Reserve as an operational force means success in ongoing operations in which the Army Reserve plays a vital role. The Army Reserve offers a wide array of capabilities to include HD, DSCA, and training divisions to provide staff and tactical training to foreign militaries. As such, the Army Reserve requires sufficient modernized equipment to support force generation, HD, DSCA missions, and general mobilization.

<u>Critical Needs of an Operational Reserve</u>

- Resources to respond to HD and DSCA missions.
- Increased home station training capabilities to support critical home station pre-deployment training and full spectrum training for Soldiers anytime and anywhere.
- Sustain the availability of modernized equipment in a resource- constrained environment.

b. Homeland Defense and Defense Support of Civil Authorities

The National Defense Authorization Act (NDAA) 2012 authorizes access to Army Reserve Soldiers, units, and equipment, to provide support to local authorities during domestic emergencies and major disaster operations. The Army Reserve is among the Nation's first Title 10 responders for DSCA missions, with a presence in communities in every state and territory. Additionally, the Army Reserve is engaged in the DoD planning process for complex catastrophes. All of these missions require equipment to save lives, reduce suffering, and

mitigate significant property damage. This important mission requires the unique enabler capabilities resident in the Army Reserve.

The Army Reserve has a wide range of capabilities available for use in support of HD and DSCA operations (see Table 2-12). The Army Reserve has relevant and capable units that we leverage and resource with equipment and Soldiers able to provide critical capabilities needed to sustain governmental operations in relief of human suffering and minimize property damage. Reserve assets are decentralized, providing geographical dispersion that increases the chances of having a unit with the right capability to respond to a domestic major disaster or emergency.

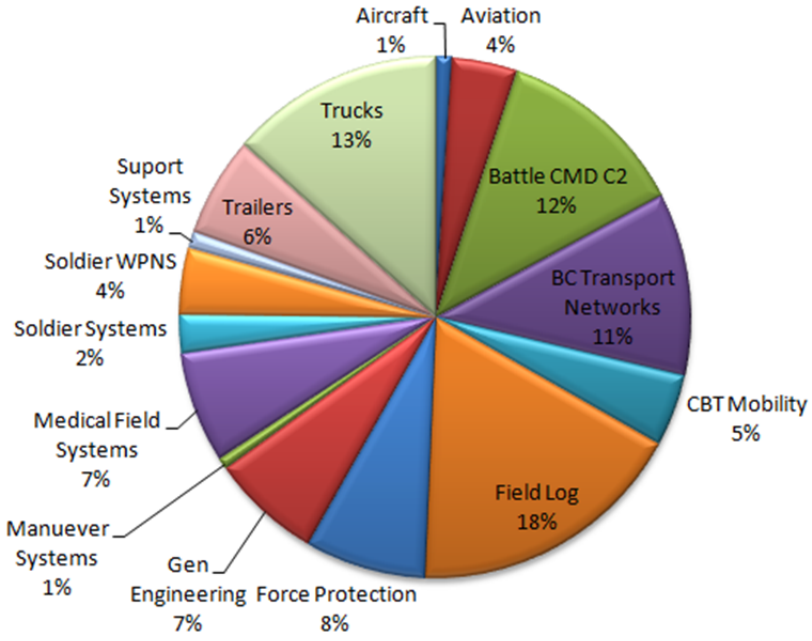
Table 2-12. Army Reserve Capabilities to Support HD/DSCA

Type of Unit	Number of Units	Percentage of Total Army
Aviation	29	4%
Chemical	50	43%
Civil Affairs	46	70%
Engineer	288	31%
Medical	216	59%
Military Police	113	24%
Mortuary Affairs	6	75%
Quartermaster	144	64%
Transportation	300	44%
Signal	20	17%

The Army Reserve provides a significant portion of the Army's contingency response force; as such, those designated units are a priority for equipment distribution and maintenance readiness. Subsets of these capabilities reside in units that are vital to the execution of HD and DSCA missions. Critical Dual Use (CDU) equipment is defined as those items required to support both operational and HD/DSCA missions (see Table 2-13). Some units may have less CDU equipment on-hand than needed due to a myriad of reasons. This requires the Army Reserve to maximize its use of specialized commercial off-the-shelf equipment to meet HD/DSCA mission requirements.

The Army Reserve contributes a range of capabilities to the CBRN response enterprise. The Army Reserve provides the capability to respond to two simultaneous catastrophic events involving the use of weapons of mass destruction or a terrorist event. These capabilities include a Theater Aviation Command, medical brigades and hospitals, consequence management units, movement control detachments, firefighting units with specialized search and extraction capability, and chemical/biological detection units. These units provide Title 10 military assistance to a lead Federal agency in the event of a CBRN attack on our Nation.

Table 2-13. Army Reserve Critical Dual Use (CDU) Capability Percentage



Capability	USAR LINS
Aircraft	3
Aviation	12
Battle Command C2	35
Battle Command Transport Networks	33
Combat Mobility	13
Field Logistics	51
Force Protection	22
General Engineering	20
Maneuver Systems	2
Medical Field Systems	20
Solider Systems	7
Soldier Weapons	12
Support Systems	3
Trailers	18
Trucks	39
Grand Total	290

2. Status of Equipment

a. Equipment On-hand

Modernization efforts within the Army have improved the Army Reserve's ability to perform its mission within all operational environments. Army Reserve Soldiers are receiving and training on some of the latest equipment within the Army's force structure. The Army Reserve possesses 86 percent of its wartime equipment requirement, with 66 percent of this equipment modernized. National Guard and Reserve Equipment Appropriation (NGREA) funding provides the Army Reserve a method to procure the most modernized CS and CSS equipment to fill critical equipment on-hand gaps that are not otherwise scheduled for procurement via the Army budget. NGREA directly increases readiness in the Army Reserve. For example, the Army Reserve used NGREA to procure engineer construction equipment and ATLAS forklifts, which are not in the Army's future years procurement plan, providing increased and balanced capabilities, readiness, and resources to units. *Table 2* highlights the average age of major items of the Army Reserve fleet. The Army Reserve continues to rid its fleet of obsolete and legacy equipment, which remains a financial burden to fix, store, and operate. Shortages of modernized training equipment at home stations and training centers increase training time, transportation costs, and travel expenses. The Army Reserve has critical modernization shortages in Tactical Wheel Vehicles, Engineering and Construction Equipment, Force Protection, and Field Logistics Systems (see Table 2-14). The Army Reserve must remain focused as to the challenges to balance our Title 10 responsibility and answer the Nation's call to HD and DSCA missions.

Table 2-14. Army Reserve Top Capability Modernization Shortages

Equipment	FY 2016 Total Requirement	FY 2016 Modern Equipment On-hand (EOH)	FY 2016 Modern Shortage	Percentage Modernized
Construction & Engineering	17,463	11,706	5,757	67%
Field Logistics Systems	54,500	36,585	17,915	67%
Force Protection	191,372	33,795	157,577	18%
Tactical Wheel Vehicles	37,067	16,627	20,440	45%

b. Average Age of Major Items of Equipment

Extending the life cycle of equipment within our inventory remains a challenge. There are a myriad of reasons for these challenges, e.g., lack of funding, slow production rates, reset issues, and requirements approved in advance of resourcing. Fiscal constraints dictate that equipment must remain in the force structure beyond its service life. The Army uses reset or recapitalization programs to extend the equipment service life of its equipment. The Army Reserve manages a rebuild program to extend the equipment service life of some of its critical tactical systems. Aggressive rebuild programs and incremental replacement of legacy systems are critical in decreasing the Army Reserve's average equipment age.

Table 2-15 provides a list of the Army Reserve top five legacy equipment items.

Table 2-15. Army Reserve Top 5 Legacy Equipment

Nomenclature	Equipment LIN Number	Average Age (years)
Tractor (Full Tracked, Low Speed)	W76816	39
Trailer, Bolster, General Purpose, 4-ton, M796	W94536	39
Loader Scoop, Type, DED	L76556/L76321	38
Recovery Vehicle, Medium, M88A1	R50681	37
Semitrailer Van, 6-Ton Repair Parts, M749/M750	S74832	37

c. Compatibility of Current Equipment with AC

The Army's equipping strategy is to ensure all units are deployed with the best equipment to meet its mission requirements. The Army Reserve's force structure largely consists of CSS organizations.

These differences are addressed during the pre-mobilization or planning phase. The Army Reserve continues to partner with Army to ensure that we maximize critical equipment compatibility efforts. The Army has made considerable investments to ensure our Soldiers deploy with the most modernized equipment. The Army has chosen to accept risk in equipping institutional training and other TDA activities in the Generating Force. For example, Soldiers train with HMMWVs in lieu of MRAPs.

d. Maintenance Issues

i. Field-Level Maintenance

Numerous Army Reserve facilities require modifications and upgrades to support the increased modernized fleet. Army Reserve must ensure that our investment in facility upgrades, tools, and maintenance training keeps pace with equipment deliveries.

ii. Sustainment-Level Maintenance

Depot maintenance programs repair and return Army Reserve equipment to like-new conditions with zero miles and zero hours. Budget constraints prevent the Army Reserve from inducting aging equipment into these programs. Sometimes this includes technology insertions when original equipment manufacturer parts are no longer available.

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

- **Truck, Palletized Loading, 10×10 w/o Material Handling Crane (M1075)**: The M1075 cargo truck is equipped with a hydraulic Load Handling System (LHS) capable of self-loading and unloading. It does not have the Material Handling Crane. The Army Reserve owns 60 percent of the total Army structure for this capability and has rebuilt 12 percent of the systems.

- **Palletized Load System Trailer (M1076)**: The M1076 trailer is designed specifically for interoperability with the Palletized Load System (PLS) trucks. The trailer can be loaded directly from the PLS truck using the LHS and M1077 Flat-rack. The Army Reserve owns 60 percent of the total Army structure for this capability and has rebuilt 16 percent of the systems.

- **Semitrailer Tanker (M967A1)**: The M967A1 provides the capability of transporting 5,000 gallons of fuel over highways and limited unimproved roadways. The Army Reserve owns 90 percent of the total Army structure for this capability and has rebuilt 48 percent of the systems.

- **Heavy Expanded Mobility Tactical Truck (HEMTT) Wrecker (M984)**: The Army Reserve fleet currently consists primarily of A1 and A2 models (65 percent). The average age of the A1 model is 19 years. The modernized item is the M984A4/A5. The Army Reserve has rebuilt 40 percent of these wreckers through various rebuild, reset, and recapitalization programs.

- **10,000 Lb. Forklift**: This forklift is used primarily in rough terrain for supply holding areas and marshaling yards, and used by supply, maintenance, transportation, and engineer units to manage movement of equipment and load/unload containers. The Army Reserve owns 90 percent of the total Army structure for this capability and has rebuilt 29 percent of the systems.

iii. Modernizing the Tactical Wheeled Vehicle Fleet

To mitigate modernization shortfalls, the Army Reserve inducts equipment into national-level maintenance programs to restore or rebuild equipment to like-new condition. This results in an increase of the modernization and compatibility with the rest of the Army. As a result, the Army

Reserve has rebuilt 70 percent of its five-ton Cargo Trucks and 83 percent of its Semitrailer Tankers.

iv. Overall Equipment On-hand Readiness

The Army Reserve possesses 86 percent of its unit equipment requirement, with 66 percent of this equipment modernized. The Army Reserve FY 2013 budget request properly funds the operational reserve to ensure the force structure required for homeland operations. The Army Reserve possesses 79 percent (with substitutions) of its CDU equipment requirement. Emphasis remains on eliminating obsolete equipment from requirements documents, cross-leveling within commands, and replacing legacy equipment with modernized equipment.

B. Changes since the Last NGRER

1. Transparency/Traceability

The Army has complied with the DoDD 1225.06 to modify budget exhibits to show component-level funding and quantities, submit semiannual Equipment Transparency Reports to OASD(RA), and show requested funding and subsequent deliveries to the ARNG and USAR. The Army's goal is to tie the equipment certification back to an appropriation. The Army has given the Army Reserve increased visibility on equipment procurements and deliveries for 101 critical systems. However, the transparency process is a manual process, which decreases the level of data accuracy and reliability in the equipment traceability process.

2. Army Reserve Equipping Strategy

The Army Reserve goal is to ensure that units and Soldiers have the most modern equipment to implement and sustain the ARFORGEN model in support of Army Doctrine Publication 3-0, *Unified Land Operations*. The Army Reserve must strike a balance between sustainment of the equipment on-hand and limited resources. The Army Reserve recognizes as future Army equipping budgets decrease, it will have to increase its reliance on sustainment and modernization programs. These programs are essential to the viability of the Army Reserve's older systems that are retained in-lieu-of modernized items. The repairs conducted at Department of Army and Army Reserve field-level facilities will ensure equipment is properly maintained for training or operational use. Equipment recapitalization will extend service life, reduce operating and support costs, enhance capability by adding new technological features, and improve system reliability. The Army Reserve continues to identify and divest older and excess systems in its inventory. This process has enabled the Army Reserve to determine true equipment capability requirements and replace older systems with the most modern systems available. The success of the Army Reserve equipping strategy will only be achieved through continuous investment in new procurement, recapitalization, and sustainment programs.

3. Equipping Successes

The Army's continued focus is to increase Soldier survivability. In an effort to protect our Soldiers on the battlefield, Army Reserve Soldiers received improved armored vehicles. The Army Reserve has received equipment deliveries in Tactical Wheel Vehicles, Engineering Equipment, and Force Protection Equipment. These successes are critical in the Army Reserve's ability to support foreign and domestic operations.

C. Future Years Program (FY 2014–FY 2016)

1. New Equipment Procurements

a. Base Budget

By the end of FY 2013, Army Reserve anticipates significant increases in tactical vehicles, power generation, communication, and construction equipment. This equipment replaces obsolete and older equipment within our units. Critical modernization shortfalls remain in the areas of tactical vehicles, mission command, engineer construction, material handling, combat mobility, force protection, and civil affairs/military information support operations systems.

b. National Guard Reserve Equipment Appropriation

NGREA is an invaluable tool to procure modernized equipment that the Army is unable to provide. In FY 2012, the Army Reserve received $145M in NGREA funding to increase its operational readiness. The Army Reserve received a total of $794M of NGREA funding from FY 2005 to FY 2012, an average of $113M per year. The goal for NGREA programs is to directly increase capabilities within the Army Reserve. NGREA equipment procurement supports the Army Campaign Plan and Modernization Strategy.

2. Anticipated Transfers from AC to RC

Table 5 reflects equipment transfers from AC to the Army Reserve from FY 2014–FY 2016.

3. Anticipated Withdrawals from Army Reserve Inventory

The Army Reserve does not anticipate any equipment withdrawals of major end items.

4. Simulators

Simulation and simulator programs remain a focus area for the Army Reserve in a constrained resources environment. These programs are critical in supporting an operational force as well as collective and individual training. Technological advances in simulators have made it more efficient and cost effective to invest in this capability. Increasing the use of training simulators to mitigate equipment training shortfalls at home station and training centers enables the Army Reserve to leverage resources across the entire funding spectrum. The Army Reserve remains committed to providing suitable platforms to support critical home station training. Increasing simulation and simulator programs, such as live, virtual (simulators), and constructive (simulations), allows for realistic training at a lower price.

Various innovative training simulation systems have been developed to enhance Soldier medical training. As technology advances, simulators provide Army Reserve medics and medical personnel realistic training at their home station at a fraction of the cost of sending them to Regional Training Sites for annual recertification, such as Combat Lifesavers and Emergency Medical Technicians. Additional simulators are needed to expand this capability, as over 50 percent of these Soldiers are in the Army Reserve.

5. Equipment Shortages and Modernization Shortfalls

The following sections highlight the Army Reserve equipment shortages and modernization shortfalls for each of the eleven Army Reserve's Equipment Capability Categories. See Annex A at the end of this chapter narrative for an explanation of the embedded tables in these sections.

a. Aviation

Army Reserve aviation represents 15 percent of the total Army's aviation force with a current requirement of 205 fixed and rotary wing airframes. Of this amount, the Army Reserve has 97 percent of its EOH. The current EOH is sufficient to meet mission requirements. Future aviation rebalancing and modernization will allow Army Reserve aviation to remain an operational force ready to support all mission requirements.

The HH-60 (Blackhawk) Medical Evacuation (MEDEVAC) units will have an increased airframe requirement of 3 aircraft from the current authorization of 12. This new authorization will increase MEDEVAC capabilities to 15 aircraft during FY 2016.

Another initiative under the current Future Years Defense Program (FYDP) is the replacement of an aging CH-47D fleet. The transformation will replace all Army Reserve CH-47D models with the modernized CH-47F model, with the first airframe delivered during the third quarter of FY 2014 and completion by the third quarter of FY 2017.

The fixed-wing fleet is currently short four C-12 aircraft as of FY 2012. The C-12 shortage will remain until HQDA makes a decision on aviation rebalancing within the Army. The UC-35 fleet, although aging, remains at 100 percent on-hand.

b. Mission Command

- **Network Transport Systems**: These systems include multiple satellite and functional network systems that provide the information infrastructure required to communicate in a tactical environment. Based on the current FYDP, the Army Reserve is expected to complete fielding of Secure Mobile Anti-Jam Reliable Tactical Terminal, Global Broadcast Service, and Phoenix systems during the fourth quarter of FY 2014.

- **Mission Command Systems**: These systems consist of information network systems, facilities, and equipment to support multi-echelon command levels designed to facilitate digital planning, integrate information sharing, and provide immediate command and control of the battlefield. The Army Reserve is on pace to field 90 percent or more of Command Post of the Future, Blue Force Tracker, and Battle Command Sustainment Support System requirements by FY 2016. However, the Army's decision to cut funding for the Standardized Integrated Command Post System (SICPS) in FY 2012 has created a large capability gap for the Army Reserve. SICPS is a critical piece of equipment for integrating command post systems and the ability to stand up a Tactical Operations Center, particularly for expeditionary missions. To date, the Army Reserve has used NGREA funds to procure 15 percent of the SICPS requirements.

c. Field Logistics Systems

- **Quartermaster/Maintenance**: CSS Logistics Systems are comprised of maintenance, food service, mortuary affairs, and liquid logistics (fuel/water) systems (see Table 2-16). The Army Reserve has 100 percent of the Force Provider units in the Army Structure. Shortfalls for liquid logistics equipment diminish Army Reserve logistics capabilities. Due to operational deployment, the Army Reserve lacks sufficient Force Provider equipment to train at its home stations.

Table 2-16. Quartermaster/Maintenance Systems

Equipment	FY 2016 Required	FY 2016 On-hand	FY 2016 Modern On-hand	FY 2016 Modern Shortage	Unresourced Requirement
Air Condition Unit	3,865	7,554	21	3,844	$0.0
Field Feeding	1,822	3,757	15	1,807	$39.8M
Liquid Logistics (Water/Petroleum Equipment)	5,835	6,557	66	5,769	$0.0
Maintenance	38,937	47,785	342	38,595	$2.2M
Material Handling	4,831	4,710	34	4,797	$7.9M
Shelter	154	77	3	151	$0.0
Soldier Support (Laundry/Bath Equipment)	1,563	13,740	53	1,510	$0.0

- **Medical and Dental**: Medical and dental capabilities are critical to the Army Reserve's ability to meet HD and DSCA missions. The Army Reserve provides 59 percent of the medical and dental structure for the Army. Continuous rotations make it difficult to balance training, operational, and civilian requirements. The Army Reserve lacks sufficient biomedical facilities to sustain and maintain critical medical equipment. Upgraded maintenance facilities are needed to keep pace with modernization.

d. Transportation

The Army Tactical Wheeled Vehicle (TWV) Strategy serves as a plan to achieve and sustain the capabilities the Army will need for the next 30 years. The Army Reserve lacks the right mix of tactical wheeled vehicles to meet its operational requirements. Rebalancing studies are being conducted to ensure that all Army components have sufficient transportation capability to meet all mission requirements. Critical investments in new procurement and recapitalization programs have been instrumental in increasing the Army Reserve's tactical wheeled vehicle fleet modernization. The following four fleets comprise the Reserve TWVs: light, medium, heavy, and Mine Resistant Ambush Protected (MRAP) (see Table 2-17).

- **Light Tactical Vehicle (LTV)**: The Army has obtained the procurement objective for the HMMWV and will not seek additional production. The Army Reserve is projected to have 100 percent of its HMMWV requirement by FY 2013; however, only 19 percent are armor capable. The Army plans to reallocate armor capable vehicles to the Army Reserve to replace legacy equipment and serve as a bridging strategy until the Joint Light Tactical Vehicle is developed and fielded. The remaining LTV fleet is comprised of un-armored or legacy vehicles, which are limited to HD or DSCA operations that do not require armor capable

equipment. The HMMWV fleet will remain in the Army Reserve inventory for the foreseeable future.

- **Medium Tactical Vehicle (MTV)**: The MTV fleet is projected to be at 100 percent fill and 80 percent modernized by the end of FY 2016. Anticipated Department of Army fleet reductions and cross-leveling is projected to increase the MTV modernization levels and divest most M900 series vehicles from the fleet by FY 2016.

- **Heavy Tactical Vehicle (HTV)**: The Army Reserve is projected to have 100 percent of its HTV requirement on-hand by the end of FY 2016; however, this includes legacy systems that are not armor capable and cannot be deployed in support of current combat operations. The Army Reserve M915 line haul tractor fleet is expected to be at 100 percent fill and 68 percent modernized by the end of FY 2013. The family of Heavy Expanded Mobility Tactical Trucks (HEMTT) is projected at 86 percent on-hand by FY 2013. Anticipated quantities due to reallocation of vehicles will increase the on-hand percentage, and the continued funding of the recapitalization of un-armored vehicles to armor capable will increase modernization levels substantially by FY 2016. The HEMTT wrecker fleet, a critical asset for recovery operations, is projected at 82 percent of the total requirement, the HEMTT Light Equipment Transport (LET) is projected at 74 percent modern by 2015, and the PLS fleet is projected at 93 percent by FY 2013. Projected Army reallocation of vehicles will increase the on-hand and modernization levels of these fleets.

- **Mine Resistant Ambush Protected (MRAP)**: The Army Reserve is projected to receive MRAP vehicles beginning in FY 2017 to support operational and training requirements. This decision will require full integration of MRAPs into the force structure, proper training, and a mature support structure capable of ensuring operational availability. As the vehicle size and weight are larger than most combat vehicles, sustainment facilities may require upgrades to support the heavier fleet. In some units, MRAPs will displace organic vehicles to provide a more capable convoy protection platform.

Table 2-17. Transportation Systems (Tactical Vehicles)

Equipment	FY 2016 Required	FY 2016 On-hand	FY 2016 Modern On-hand	FY 2016 Modern Shortage	Unresourced Requirement
LTV	20,690	20,690	10,119	10,571	$1,500M
MTV Cargo Truck (5T)	4,047	2,909	2,357	1,690	$338M
MTV Dump Truck (5T)	979	440	439	540	$108M
HEMTT LET	2,081	540	540	1,541	$503M

e. Watercraft

The unique capabilities of Army Reserve watercraft provide support to meet both HD/DSCA and combat requirements (see Table 2-18). These assets require on-condition cyclic maintenance (OCCM) every 3 years for motorized craft and 4 years for barges. The OCCM cost per vessel ranges from $0.6M to $10M. The annual expense for OCCM ranges from $15M–$22M. Training requirements create increased maintenance and dry docking costs.

- **Landing Craft Utility (LCU) 2000**: The LCU 2000 fleet is over 23 years old and is quickly approaching the end of its economically useful life. Due to age and use, a service life extension plan is required for the fleet. The Army Reserve is providing crew support for deployed LCU 2000 requirement and will continue to crew these vessels for the next two deployment cycles. The Army Reserve has two units that require 10 LCU 2000 crews and only seven LCU 2000s on-hand to conduct training. This is mitigated by sharing the equipment and using simulators; however, the simulators lack a vessel engineer training capability.

- **Barge Derrick Crane 115 Ton (BD-115T)**: The Army Reserve has a shortfall of one Barge Derrick, with two on-hand. The Army Reserve is mitigating this shortage by sharing one of the existing Barge Derricks between two AR units and an AC unit, which is also short one Barge Derrick.

- **Large Tug 128 Foot:** The Army Reserve is required and authorized three Large Tug 128s. At the end of FY 2016, Army Reserve is projected a shortage of one Tug. Due to fiscal constraints, the Army has decided to delay procurement until operations tempo requires this capability.

- **Landing Craft Mechanized (LCM) 8**: The LCM 8 fleet was fielded in 1967 and is well beyond its life cycle. Costs to maintain this fleet have increased dramatically and require extensive dry docking repairs and time.

Table 2-18. Watercraft Systems

Equipment	FY 2016 Required	FY 2016 On-hand	FY 2016 Modern On-hand	FY 2016 Modern Shortage	Unresourced Requirement
LCU 2000	20	7	7	13	$455.0M
Barge Derrick 115 Ton	3	2	2	1	$24.0M
Large Tug 128 Foot	3	2	2	1	$12.5M
LCM 8	8	12	12	0	$0.0

f. Intelligence and Electronic Warfare (IEW) Systems

The Army is in the process of realigning and optimizing existing IEW capabilities within its force structure. The Army Reserve owns 17 percent of the overall IEW structure. As such, the Army Reserve remains a vital player within the IEW community; however, lengthy individual training and security clearance requirements pose daunting challenges to maintain unit readiness.

g. Construction and Engineering Equipment

The Army Reserve has made significant improvement in the modernization of construction equipment and has fielded the first three unit sets of route clearance equipment. Mobility equipment consists mainly of bridging, countermine, and engineering equipment, all found in the engineer force structure (see Table 2-19). The Army Reserve retains approximately 31 percent of all the engineer units, which includes 32 percent of the Army's Multi-Role Bridge Companies. Along with this large portion of the force structure comes several equipping and training challenges. Current fielding of the modern scraper replaces the existing fleet of equipment that is over 25 years old.

Table 2-19. Construction and Engineering Equipment

Equipment	FY 2016 Required	FY 2016 On-hand	FY 2016 Modern On-hand	FY 2016 Modern Shortage	Unresourced Requirement
Construction	4,933	4,997	53	4,880	$0
Firefighting	203	210	5	198	$0
Scraper	236	263	5	231	$0

h. Force Protection

Force Protection equipment includes CBRN equipment and contains over 60 separate systems for the Army Reserve. Most of these systems in the Army Reserve have been replaced by modern battlefield intrusion detection systems, chemical agent detectors, biological and protective shelters, and decontamination equipment. In FY 2014, the Army Reserve is programmed to receive the Nuclear-Biological-Chemical Reconnaissance Vehicle (NBCRV), a Stryker-based platform incorporating multiple detection systems. The on-hand quantities and modernization of these systems have improved over the last several years, but still have shortfalls in several key areas. The shortfall in modern Force Protection systems is over $8M across the FY 2013–FY 2017 budget period.

i. Civil Affairs (CA) and Military Information Support Operations (MISO)

A multitude of equipping challenges continues to contribute to a reduced readiness posture, since the realignment of CA and MISO from United States Special Operations Command to the Army Reserve (see Table 2-20). HQDA has initiated a capability review process to provide oversight of current and future equipping actions that will improve the readiness of CA and MISO unique equipment. Collectively, systems including the Special Operations Forces (SOF) Deployable Node-Lite, Mission Planning Kit, and Tactical Local Area Network (TACLAN) are projected at less than 30 percent on-hand in FY 2015. HQDA has placed increased emphasis on funding equipment requirements during the programming process.

Table 2-20. CA and MISO Systems

Equipment	FY 2016 Required	FY 2016 On-hand	FY 2016 Modern On-hand	FY 2016 Modern Shortage	Unresourced Requirement
SOF Deployable Node-Lite (SDN-L)	709	614	614	95	$14.2M
Mission Planning Kit (MPK)	952	433	433	0	$0.0
TACLAN	59	45	45	14	$4.8M
Product Distribution System-Lite (PDS-L)	709	476	476	233	$0.0

j. Soldier

Soldier equipment consists mainly of individual weapons, night vision devices, and thermal weapon sights. These devices are found in all units. The new M320 grenade launcher has been fielded to 80 percent, and fielding is expected to be completed in FY 2013 along with additional M4 rifles to support growing requirements. Night vision and thermal weapon sight production procurement continues to meet Army Reserve requirements.

k. Organizational Clothing and Individual Equipment (OCIE)

The Army Reserve is currently in the five-year HQDA plan to modernize individual Soldier equipment. Individual Soldier equipment includes OCIE, which consists of a Soldier's basic load of helmet, goggles, safety equipment, protective gear, and mission-required equipment. Unfunded shortfalls include 120,000 sets of Individual Body Armor Improved Outer Tactical Vests, at a cost of $33M, and 10,000 sets of Gen III Aviation air crew support equipment, including fire resistant flight safety boots, at a cost of $20M.

D. Summary

As the Army Reserve transitions to an operational force, priority remains on providing trained, equipped, ready, and accessible Soldiers and cohesive units. These priorities support the full range of planned and contingency operations to the Total Force. The enactment of NDAA 2012 authorizes the Army Reserve to activate in response to a request from a state governor to the Secretary of Defense, within 72 hours for missions up to 120 days. The Army Reserve has the capacity to support civil authorities during domestic major disasters and emergencies by utilizing Army Reserve Soldiers residing in 1,200 communities across the Nation. The Army Reserve with its many critical capabilities is prepared to meet the needs of communities in crisis. Increased investment in training simulators will assist in mitigating equipment shortfalls and sustainment costs in a fiscally constrained environment. As a steady demand for Army Reserve capabilities continues, the Army Reserve remains an essential component of the Total Force.

Annex A
Explanation of Army Reserve Embedded Equipment Tables

Equipment	FY 2016 Required	FY 2016 On-hand	FY 2016 Modern On-hand	FY 2016 Modern Shortage	Unresourced Requirement
ATLAS II	1,042	1,042	905	137	$22.8M

Equipment—General nomenclature of the equipment item.

FY 2016 Required—Based on the forecasted requirement at the end of FY 2016.

FY 2016 On-hand—Based on the forecasted on-hand at the end of FY 2016.

FY 2016 Modern On-hand—Removes equipment considered not modern from the *FY 2016 On-hand* number. Modern equipment is defined as the most current equipment item that meets global mission requirements.

FY 2016 Modern Shortage—*FY 2016 Required* minus *FY 2016 Modern On-hand.*

Unresourced Requirement—Average estimated cost of the equipment multiplied by the *FY 2016 Modern Shortage.*

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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. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Air Defense							
Center: Communications Operations	C18033	$3,000,000	1	1	2	4	1
Computer: Tactical AN/GYQ-88	C77755	$59,199	1	3	3	3	13
Aircraft							
Airplane Cargo Transport: C-12D	A29812	$1,967,301	4	4	4	4	0
Airplane Reconnaissance: RC-12N	Z04821	$4,641,000	0	0	0	0	12
Helicopter Utility: UH-60A	K32293	$4,635,000	0	0	0	0	8
Helicopter: Attack AH-64D	H48918	$25,128,800	48	48	48	48	56
HH-60L MEDEVAC Helicopter	U84291	$7,908,000	6	6	6	6	30
HH-60M MEDEVAC Helicopter	M33458	$7,800,000	24	24	24	24	30
Utility Cargo Aircraft: UC-35A	Z95382	$3,995,000	7	7	7	7	8
Aviation							
External Stores Subsystem (ESSS): UH-60A	E21985	$676,111	10	10	10	10	76
Heater Kit Cabin: UH-60A	H40083	$75,789	0	0	0	0	38
Kit Aeromedical Evacuation: UH-60A	K40878	$141,502	0	0	0	0	60
Kit Air Transportability: UH-60A	K27251	$27,686	45	45	45	45	84
Kit Winterization: UH-60A	K44101	$10,026	0	0	0	0	76
Launcher Guided Missile: Longbow Hellfire XM299	L67410	$72,157	145	145	145	145	192
Modification Kit: Utility Hoist UH-60A	M59733	$7,547	6	6	6	6	60
Radio Set: High Frequency AN/ARC-220 (V)2	R81623	$23,358	9	9	9	9	48
Radio Set: High Frequency AN/VRC-100 (V)1	R81691	$33,707	15	15	15	15	29
Seat Rescue: Forest Penetrating	S68271	$5,318	15	15	15	15	60
Battle Command and Control (C2)							
Air Conditioner: 54000 Btu 208V-Ac 3Ph 50/60 Hz	A26852	$10,826	441	441	441	441	966
Air Conditioner: Fl/Wall A/C 18000 Btu Cmp Hz	A24017	$8,060	339	339	339	339	406
Environmental Control Unit: 60K Btu/hr HD-1240/G	B29108	$9,000	43	43	43	43	202
Carrier Armored Command Post: Full Tracked	C11158	$374,086	1	1	1	1	24
Command System Tactical: AN/TYQ-155 (V)1	C61290	$89,057	105	105	105	105	97
Communications Central: AN/ASC-15E	C59313	$617,900	0	0	0	0	18
Computer Set: AN/UYK-128(V)3	C18378	$15,954	2,135	2,919	3,156	3,175	10,258
Computer System Digital AN/UYQ-90(V)2	C18278	$5,650	2,982	2,992	2,992	2,992	8,711
Computer Set: Digital AN/GYK-62B	C13866	$16,530	145	145	145	145	372
Distribution System Elec: 120/208V 3ph 40amp	F55485	$6,258	610	640	640	706	856
Distribution System Elec: 120V 1ph 60amp	F55553	$5,106	719	1,182	1,278	1,374	1,346
Gen Set DED TM: 10kW 60Hz	G42170	$25,757	330	337	338	366	353
Gen Set DED TM: 5kW 60Hz	G42238	$23,738	427	610	610	734	519
Generator Set Diesel Engine TM: PU-802	G53778	$31,481	297	308	308	437	545

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Loudspeaker NGLS-Dismounted	L26831	$13,035	1,245	1,245	1,245	1,245	640
Loudspeaker NGLS-Mounted	L26899	$35,000	626	640	640	640	640
Navigation Set: Satellite Signals AN/GSN-13	N96180	$39,152	0	16	28	36	57
Rigid Wall Shelter: Command Post	R98145	$162,800	2	2	2	2	11
Battlespace Awareness							
Data Analysis Central: AN/MSW-24	D77801	$318,673	2	4	4	4	8
Detecting System Countermeasures: AN/MLQ-40(V)4	D04182	$1,400,000	4	4	4	4	16
Digital Topograph System: AN/TYQ-67(V)	D10281	$2,500,000	4	4	4	4	9
Battle Command Transportable Networks							
Battalion Command Post(Switching Group): OM-XXX	B67234	$198,555	26	26	26	26	146
Central Office: Telephone Automatic AN/TTC-56	C20550	$1,250,000	1	1	1	1	10
Computer Set General: AN/GYK-33D	C18297	$26,000	43	43	43	43	82
Cryptographic Speech Equip: MTU TSEC/KY-100	C52700	$6,159	143	143	143	143	626
Encryption-Decryption Equipment: TACLANE KG 175	E08940	$10,950	59	59	59	59	115
Handheld Type 1 Radio	R55336	$8,900	1,057	1,057	1,057	1,057	1,680
Joint Base Station (JBS): LITE	J00719	$400,000	61	76	80	110	43
Joint Node Network (JNN) Central Ofc Telephone Auto	J05001	$1,172,115	6	16	16	16	16
MBITR: Urban Version	M18029	$11,900	1,461	1,461	1,461	1,461	3,705
Radio Set: AN/PRQ-7	R31430	$8,988	652	652	652	652	720
Radio Set: AN/GRC-106	Q32756	$18,602	6	6	6	6	174
Radio Set: AN/PRC-104A	R55200	$12,000	6	6	6	6	513
Radio Set: AN/PSC-5	R57606	$27,000	94	94	94	94	2,652
Radio Set: AN/VRC-90F(C)	R68044	$7,415	12,510	12,560	12,626	12,628	31,894
Receive Suite: AN/TSR-8	R30658	$148,583	5	5	7	7	86
Receiving Set: Radio AN/ARW-83	R53467	$20,000	0	0	0	0	12
Satellite Communication System: AN/TSC-156	S23268	$2,000,000	24	25	25	25	28
Terminal: Satellite Communication AN/TSC-154	T81733	$825,000	0	0	0	0	18
Combat Mobility							
Boat Bridge Erection Inboard Engine: Shallow Draft	B25476	$210,000	81	81	81	81	126
Bridge Armor Vehicle Launched Scissors: 63ft MLC 70	B31098	$304,952	47	47	47	47	114
Bridge Erection Set Fixed Bridge: UK Medium Girder Bridge	C22126	$488,354	5	5	5	5	18
Bridge Fixed: Highway Alum UK Medium Girder Bridge 100ft	C22811	$964,515	13	13	13	13	16
Bridge Heavy Dry: Supt (HDSB) 40m MLC96	B26007	$2,676,000	24	27	27	27	20
Cradle: Improved Boat (IBC) M14	C33925	$22,064	94	94	94	94	126
Detecting Set: Mine AN/PSS-14	D03932	$19,300	877	877	877	877	2,269
Instrument Set Recon / Surveying: AN/TKQ-5	D17191	$61,488	51	51	51	51	222
Launcher Heavy Dry Support Bridge: (HDSB)	L67660	$937,000	24	24	24	24	20
Launcher Mine Clearing Line Charge: (MICLIC)	L67342	$44,000	89	89	89	89	100
Loader Skid Steer: Type Ii	L77147	$31,390	152	198	198	198	202
Mine Protected Clearance Vehicle	M05004	$971,923	6	12	15	18	6
Mine Resistant Vehicle	M74226	$850,000	0	54	81	81	266
Munition: Network Command (Spider)	M92387	$78,000	0	3	3	3	83
Pallet: Bridge Adapter (BAP) M15	P78313	$37,085	293	293	293	293	378

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Ramp Bay Bridge Floating	R10527	$134,112	81	81	81	81	108
Reinforcement Set: Medium-Girder Bridge	C27309	$498,940	7	7	7	7	18
Tractor FT HS: Armored Combat Earthmover (ACE)	W76473	$887,050	67	67	67	67	76
Transporter Common Bridge	T91308	$226,150	392	392	392	392	504
Vehicle Mounted Mine Detection (VMMD) System	V05001	$331,200	12	24	27	28	12
Field Logistics							
Crane Wheel-mounted: Hyd Rough Terrain (RTCC)	C39398	$450,194	5	5	5	5	2
Force Provider Module: Houses 550 Soldiers	F28973	$8,254,673	0	0	0	0	6
Fuel System Supply Point: Portable 60K-gal	J04717	$30,213	149	149	149	149	498
Hoseline Outfit Fuel Handling: 4in Dia Hose	K54707	$343,437	36	36	36	36	76
Laboratory Petroleum Semitrailer mounted	L33800	$650,000	7	7	7	7	13
Laundry Advanced System: (LADS) Trailer-mounted	L70538	$620,000	54	71	71	71	108
Load Handling Sys: 2000G Comp Water Tank-Rack (HIPPO)	T32629	$131,839	51	67	80	103	33
Mobile Integrated Remains: Collection System	M57970	$360,000	74	79	79	79	120
Petroleum Quality Analysis System (PQAS)	P25493	$668,000	0	0	0	0	13
Pump Centrf: DED Skid mtd 6In 800 Gpm 1800 Ft Hd	P93102	$50,478	0	0	0	0	120
Refueling System: Aviation HEMMT tanker	R66273	$24,460	14	14	14	14	27
Rough Terrain Container Handler (RTCH): KALMAR RT240	R16611	$740,815	226	254	254	254	262
Tank & Pump Unit Liquid Dispensing Truck Mounting	V12141	$9,015	755	791	822	829	907
Tank Assembly Fabric Collapsible: 3K-gal Water	T19033	$2,392	75	75	75	75	0
Test Set Receiver: AN/ARM-186()	T90321	$10,243	2	2	2	2	11
Tophandler Attachment: 20ft Contr Mil-T-52951 ME	T67595	$19,709	62	62	62	62	170
Tophandler Attachment: 40ft Contr Mil-T-52951 ME	T67731	$30,064	21	21	21	21	122
Tractor Wheeled Ind: DED 4X4 w/Forklift & Crane Att	T33786	$93,202	73	73	73	73	90
Truck Lift Fork: DED 10000lb Cap 48In Ld Ctr Rough Terrain	T49119	$100,010	156	156	156	156	22
Truck Lift Fork: DED 4000lb Cap Rough Terrain	T49255	$75,000	516	516	516	516	648
Truck Lift Fork: DED 6000lb Cap Rough Terrain	X48914	$79,497	0	0	0	0	25
Truck Lift Fork: Variable Reach Rough Terrain	T73347	$166,639	823	887	887	887	1,042
Truck Tractor: Yard 46000 GVW 4X2	T60353	$96,051	92	92	92	92	284
Water Storage/Distribution Set: 40K GPD (Brigade)	W55968	$121,746	0	2	3	5	28
Water Storage/Distribution Set: 800K-gal	W37311	$200,508	5	5	5	5	0
Force Protection							
Alarm Biological Agent: (BIDS) M31E2	A48680	$1,118,000	357	357	357	357	350
Alarm Chemical Agent: Remote Sensing XM21	A32638	$173,447	21	21	21	21	156
Alarm Monitor Group: NBC (MICAD) M27	A32778	$16,000	0	0	0	0	96
Alarm: Chemical Agent Automatic M22	A33020	$10,000	1,076	1,076	1,076	1,076	4,777
Armored Security Vehicle (ASV)	A93374	$809,500	261	261	261	261	360
Collective Protection Equipment: NBC Simplified M20	C79000	$18,033	851	855	855	855	922
Decontaminating Apparatus: Pwr Drvn Lt Wt	D82404	$23,121	209	209	209	209	862
Nuclear, Biological, and Chemical (NBC) Recon Vehicle	N96543	$2,320,389	0	32	32	32	96
General Engineering							
Comp Unit RCP: Air Rec Gas and DED 88.5cfm 100psi	E69790	$16,329	0	4	4	4	0
Comp Unit Rty: Air Trlr Mtd Dsl Drvn 250cfm 100psi	E72804	$18,507	260	260	260	260	369

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Distributor Water Tank Type: 6000G Semitrailer mtd (CCE)	D28318	$30,289	56	56	56	56	96
Distributor Water: Self Propelled 2500-gal Sectionalized	D28804	$309,526	10	10	10	10	10
Dump Body Module: PLS 14-ton	D17391	$37,755	95	95	95	95	94
Fire Fighting Equipment Set: Truck-mounted Multipurpose	H56391	$151,000	1	1	1	1	6
M1158 Truck: HEMTT-based Water Tender	M31997	$420,058	42	42	42	42	41
Mixer Concrete Module: PLS 2600-gal	M81382	$127,160	27	27	27	27	33
Mixer Concrete Trailer-mounted: Gas Drvn 16 cu ft	M54151	$14,496	1	1	1	1	15
Mixing Plant Asphalt: Dsl/Elec Pwr 100 to 150 ton	M57048	$1,254,600	4	4	4	4	7
Roller: Motorized Vibratory Type III	R19753	$54,383	0	0	0	0	20
Scraper Elevating: Self Propelled 8-11 cu yd non-sect	S29971	$162,596	0	0	0	0	10
Spreader: Bituminous Module PLS 2500-gal	S13546	$85,173	2	2	2	2	4
Surveying Instrument: Meas Long Rge IR AISI	S03794	$50,000	4	4	4	4	34
Surveying Set Topographic Section	U71275	$32,205	1	1	1	1	26
Tool Kit Pipe Cutting Grooving and Beveling	W48485	$69,282	28	33	36	36	36
Tool Outfit Pioneer: Hydraulic/Electric	W58486	$46,391	84	84	84	84	107
Tractor Full Trkd: Air Dropbl w/Angdoz W/W	W76285	$71,441	0	0	0	0	30
Tractor Full Trkd: Low Speed T-5 Type II w/Ripper	Z01433	$200,000	6	10	10	10	0
Tractor Full Trkd: Low Speed T-5	Z01016	$153,705	6	10	10	10	0
Maneuver Combat Vehicle							
Carrier Personnel Full Tracked: Armored (RISE)	C18234	$405,815	182	182	182	182	403
Recovery Vehicle Full Tracked: Medium	R50681	$1,210,755	39	39	39	39	53
Maneuver Systems							
Drivers Enhancers: AN/VAS-5	D41659	$35,000	55	260	260	260	1,540
Mortar Quick Stow System: 120mm	H39473	$40,000	0	0	0	0	4
Night Sight Equipment: (TOW 2)	N04982	$116,014	0	0	0	0	8
Medical Field Systems							
Computerized Tomography Scanner Field	C79284	$960,458	0	0	1	2	4
Medical Equipment Set Ground Ambulance	M26413	$55,629	426	428	428	428	360
Medical Filmless Imaging System	M30817	$152,910	3	20	23	24	13
Medical Set Radiology Tomography CT Aug	M09826	$32,860	3	3	3	3	4
Optical Equipment Set Multivision Augmentation	P47705	$122,060	1	1	1	1	10
Soldier Systems							
Armament Subsystem: Remotely Operated	A90594	$192,360	0	0	0	0	9
Armament Subsystem: Remotely Operated	Z00751	$234,000	0	0	0	0	96
Binocular: M25	B67907	$6,120	298	682	717	717	1,406
Heavy Weapon Thermal Sight (HWTS): AN/PAS-13(V)3	S90603	$19,306	5,312	6,631	7,073	7,118	6,461
Helmet Unit: Integrated (IHADSS)	H35257	$19,573	126	126	126	126	152
Medium Weapon Thermal Sight (MWTS): AN/PAS-13(V)2	S90535	$17,591	6,933	10,453	11,382	11,411	10,519
Mini Eyesafe Laser IR Observation Set (MELIOS): AN/PVS-6	M74849	$22,015	2	2	2	2	1,819
Mounting Kit: F/M548A1	M18293	$50,000	38	38	38	38	84
Night Vision Device: AN/PSQ-20	N07848	$18,500	0	892	2,407	2,615	230
Night Vision Sight Crew Served Weapon: AN/TVS-5	N04596	$3,500	487	487	487	487	1,554
Sight: Thermal AN/PAS-13B(V)1	S60356	$17,000	7,068	7,457	7,457	7,495	6,714

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
T-11: Personal Parachute System	T91035	$5,200	1,583	1,583	1,583	1,583	11,183
Target Location and Observation: AN/PLQ-8	T27221	$40,000	10	10	10	10	208
Soldier Weapons							
Command Launch Unit: (Javelin) 13305405-119	C60750	$133,063	76	90	96	96	96
Launcher Grenade: M320	L03621	$3,413	33	493	663	835	3,452
Launcher Grenade: M320A1	L69080	$3,413	107	1,015	1,015	1,015	3,467
Machine Gun: 5.56mm M249	M09009	$3,830	12,334	12,334	12,585	12,601	11,776
Machine Gun 7.62mm: M240L	M92454	$12,000	30	78	99	99	190
Machine Gun Caliber .50: Heavy Fixed Turret Type	L91701	$13,648	263	263	263	263	360
Machine Gun Grenade: 40mm Mk19 Mod III	M92362	$15,320	2,101	2,110	2,151	2,152	2,145
Machine Gun: Caliber 50	M39331	$8,493	460	806	2,266	3,726	4,752
Machine Gun: 5.56mm M249 Light	M39263	$2,779	2,602	2,602	2,602	2,602	3,478
Rifle: 5.56mm M4	R97234	$1,329	22,275	23,608	25,184	25,509	26,428
Rifle: 7.62mm Sniper M24	R95387	$7,029	8	8	8	8	31
Shotgun: 12 Gage	S40541	$1,200	42	42	42	42	460
Strike							
Range Finder-Target Designator: Laser AN/PED-1	R60282	$300,000	0	0	0	0	6
Support Systems							
Container Handling Unit (CHU)	C84862	$34,613	55	55	55	55	1,710
Crane Barge: 89 to 250 ton	F36090	$8,000,104	2	2	2	2	3
Joint Precision Airdrop System: (JPADS)	J00947	$35,176	80	140	140	140	140
Landing Craft Mechanized: Mod2	L36654	$1,226,380	1	1	1	1	1
Landing Craft Utility: RO/RO Type 245 to 300ft Lg	L36989	$5,000,000	7	7	7	7	20
Parachute Cargo: 100 Ft Dia G-11B Vent Control System	N66560	$8,032	100	100	100	100	2,350
Platform: Container Roll-in/Roll-out	B83002	$16,633	6,479	6,490	6,490	6,490	12,944
Railway Car Trailer: Maintenance	R04619	$20,159	9	9	9	9	12
Tug: Large Coastal and Inland Waterway Diesel	T68330	$12,500,000	2	2	2	2	3
Tug: Small 900 Class	T68398	$3,600,000	6	6	6	6	6
X-Ray Apparatus: Radiographic Industrial	X91036	$17,109	3	3	3	3	18
Trailers							
Semitrailer Flatbed: Breakbulk/Cont Transporter 22-1/2-ton	S70027	$33,156	837	837	837	837	1,381
Semitrailer Low-bed: 25-ton 4-wheel	S70517	$7,729	110	110	110	110	185
Semitrailer Low-bed: 40-ton 6-wheel	S70594	$51,900	644	644	644	644	799
Semitrailer Low-bed: 70-ton Hvy Equip Transporter (HET)	S70859	$229,219	421	421	421	421	481
Semitrailer Tank: 5K-gal Bulk Haul Self-Load/Unload	S10059	$77,550	1,018	1,018	1,018	1,018	1,080
Semitrailer Tank: 5K-gal Fuel Dispensing Automotive	S73372	$97,413	422	422	422	422	403
Semitrailer Tank: Petroleum 7500-gal Bulk Haul	S73119	$27,774	357	357	357	357	480
Trailer Cargo: 1-1/2-ton 2-wheel	W95811	$10,245	0	0	0	0	18
Trailer Cargo: MTV w/Dropsides M1095	T95555	$62,829	1,247	1,397	1,407	1,407	2,212
Trailer Flatbed: 11-ton 4-wheel (HEMAT)	T45465	$34,714	135	135	135	135	358
Trailer Flatbed: M1082 Trlr Cargo LMTV w/Dropsides	T96564	$34,569	1,454	1,458	1,463	1,463	2,044
Trailer: Palletized Loading 8X20	T93761	$46,731	2,515	2,550	2,571	2,592	2,884

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Trucks							
Tractor Line Haul: M915A5	T88858	$162,968	975	975	975	975	0
Truck Ambulance: 4 Litter Armd (HMMWV)	T38844	$113,998	230	230	230	230	368
Truck Cargo: 2 1/2-ton 4X4 LMTV W/W LAPES/AD	T42063	$119,166	5	5	5	5	9
Truck Cargo: 5-ton 6X6 MTV W/W LAPES/AD	T41104	$119,265	0	0	0	0	1
Truck Cargo: 5-ton WO/W	T41515	$200,000	1,842	1,975	2,011	2,011	3,070
Truck Cargo: Heavy PLS Transporter 15-16.5 ton 10X10	T40999	$360,139	1,055	1,055	1,055	1,055	1,806
Truck Cargo: MTV LWB	T61704	$170,073	5	5	5	5	191
Truck Cargo: MTV W/W	T41135	$182,089	65	65	65	65	50
Truck Cargo: Tactical 8X8 HEMTT W/LHS	T96496	$321,057	58	58	58	58	992
Truck Cargo: Tactical HEMTT w/Lt Crane	T59278	$316,920	34	34	34	34	5
Truck Cargo: Tactical HEMTT W/Med Crane	T39586	$361,629	65	65	65	65	120
Truck Cargo: Tactical HEMTT W/W w/Lt Crane	T39518	$328,920	4	4	4	4	203
Truck Cargo: WO/Winch	T59448	$200,000	1,370	1,370	1,370	1,370	3,387
Truck Dump FMTV: 10-ton M1157	T65115	$218,378	0	0	0	0	14
Truck Dump FMTV: 10-ton	T65047	$218,378	0	0	0	0	131
Truck Dump: 10-ton W/W	T65274	$200,000	107	138	138	138	99
Truck Dump: 10-ton WO/W	T65342	$200,000	234	323	423	423	239
Truck Dump: 5-ton 6X6 MTV LAPES/AD	T65526	$129,535	1	1	1	1	24
Truck Dump: MTV	T64911	$209,309	31	31	31	31	256
Truck Dump: MTV W/W	T64979	$139,015	0	0	0	0	112
Truck Tank: Fuel Servicing 2500-gal HEMTT	T87243	$384,130	112	112	112	112	175
Truck Tractor w/Main Recovery Winch: M983A2 LET	T59415	$289,352	13	13	13	13	594
Truck Tractor: Heavy Equipment Transporter (HET)	T59048	$256,704	430	430	430	430	481
Truck Tractor: Line Haul C/S 50000 GVW 6X4 M915	T61103	$162,968	1,372	1,372	1,372	1,372	2,340
Truck Tractor: M1088A1P2 W/W	T61375	$220,000	0	0	0	0	3
Truck Tractor: MTV	T61239	$167,746	384	384	384	384	948
Truck Tractor: MTV W/W	T61307	$175,733	33	33	33	33	29
Truck Tractor: XM1070A1	Z01568	$171,000	119	189	189	189	0
Truck Utility Expanded Capacity Enhanced: M1152A1	T37588	$164,416	1,631	1,631	1,631	1,631	7,622
Truck Utility: Cargo/Troop Carrier HMMWV	T61494	$36,076	4,480	4,480	4,480	4,480	5,429
Truck Utility: ECV Armament Carrier HMMWV M1151A1	T34704	$210,000	630	630	630	630	1,234
Truck Utility: Expanded Capacity Up-Armored HMMWV	T92446	$146,844	129	129	129	129	3,071
Truck Utility: Heavy Variant HMMWV 10000 GVW	T07679	$61,665	10,196	10,196	10,196	10,196	553
Truck Van: Expansible MTV M1087A1	T41271	$218,378	77	77	77	77	199
Truck Van: LMTV	T93484	$230,363	71	71	71	71	199
Truck Wrecker	T94671	$375,000	58	58	58	58	83
Truck Wrecker: M984A4	T63161	$491,382	45	91	105	120	75
Truck Wrecker: MTV W/W	T94709	$331,680	107	107	107	107	183
Truck Wrecker: Tactical HEMTT W/W	T63093	$503,382	220	220	220	220	410
Truck: Expandable Van WO/Winch	T67136	$200,000	135	161	165	166	143

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Airplane, Cargo, Transport, C-12R	A30062	16	
Helicopter, Cargo CH-47D	H30517	22	
Helicopter, Utility UH-60L	H32361	18	
Helicopter, Attack AH-64D	H48918	12	
Airplane, Cargo, Transport, UC-35A	Z95382	14	
Battle Command and Control			
Generator Set, 15kW, PU-802 TQG	G53778	9	
Generator Set, Trailer Mounted, PU-406	J36383	35	
Combat Mobility			
Loader Scoop Type, DED w/MultiPurpose Bucket	L76556	38	
HEMTT Common Bridge Transporter, M1977	T91308	12	
Field Logistics			
Crane, Wheel-mtd, Hydraulic, Rough Terrain (RTCC)	C39398	24	
Electronic Shop, AN/ASM-189	H01855	23	
Laundry Unit, Trailer Mounted	L48315	29	
Ramp Loading Vehicle	R11154	22	
Truck, Forklift, DED 50k lb, RT, Cont Hdlr	T48941	28	
Truck, Forklift, Rough Terrain, M-10A	T49119	30	
Truck, Forklift, DED 4k lb, Rough Terrain	T49255	15	
Truck, Tractor, M878	T60353	24	
Truck, Forklift, ATLAS	T73347	11	
General Engineering			
Crane, Wheel-mtd, 25-ton, ATEC AT422T	C36586	14	
Distributor Water Tank, 6k gal, Tlr-mtd	D28318	29	
Crane, Truck-mtd, Hydraulic, 25-ton, CCE	F43429	36	
Fire Fighting Equipment Set, Truck-mtd	H56391	23	
Loader Scoop Type, DED w/5 Cy Gp Bucket	L76321	38	
Asphalt Mixing Plant	M57048	18	
Scraper, Earth Moving, Self-propelled, CCE	S56246	28	
Tractor, Full-tracked Low-speed	W76816	39	
Maneuver Combat Vehicles			
Recovery Vehicle, Medium, M88A1	R50681	37	
Trailers			
Semitrailer Tanker, 5000-gal Bulk Haul, M967	S10059	27	
Semitrailer, 22.5-ton Flatbed, M871	S70027	21	
Semitrailer, 34-ton Flatbed, M872	S70159	31	

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Semitrailer, Fuel Tank, M1062	S73119	22	
Semitrailer Tanker, 5000-gal POL, M969	S73372	23	
Semitrailer Van, Electronic, M373A2	S74353	28	
Semitrailer Van, 6-ton Repair Parts, M749/M750	S74832	37	
Semitrailer Van, Supply, M129A1C	S75175	32	
Trailer, HEMAT, 11-ton, M989A1	T45465	14	
PLS Trailer, 16.5-ton, M1076	T93761	15	
Trailer, Bolster, General Purpose, 4-ton, M796	W94536	39	
Trailer, Cargo, 3/4-ton, M101	W95537	35	
Trucks			
HMMWV Shelter Carrier, M1037	T07543	23	
HMMWV Shelter Carrier, Heavy, M1097	T07679	12	
HMMWV Ambulance, 2-litter, M996	T38707	15	
HMMWV Ambulance, 4-litter, M997	T38844	25	
HEMTT Cargo Truck, w/Lt Crane, M977 W/W	T39518	27	
HEMTT Cargo Truck, w/Med Crane, M985	T39586	24	
PLS Transporter, M1075	T40999	12	
PLS Transporter, M1074	T41067	20	
LMTV 2.5-ton Cargo Truck, w/ LAPES/AD, M1081	T41995	16	
HEMTT Fuel Tanker, 2500gal, M978 W/W	T58161	10	
Truck Tractor, HETS, M1070	T59048	20	
HEMTT Cargo Truck, w/Lt Crane, M977	T59278	20	
LMTV 2.5-ton Cargo Truck, M1078	T60081	12	
LMTV 2.5-ton Cargo Truck, M1078 W/W	T60149	12	
Truck Tractor, 14-ton Line Haul, M915	T61103	18	
Truck Tractor, 20-ton MET, M920	T61171	34	
MTV 5-ton Tractor Truck, M1088	T61239	13	
HMMWV Cargo/Trp Carrier, M998	T61494	21	
HMMWV Cargo/Trp Carrier, W/W, M1038	T61562	21	
MTV 5-ton Cargo Truck, M1085	T61704	6	
MTV 5-ton Cargo Truck, M1083	T61908	8	
HEMTT Wrecker, M984	T63093	18	
MTV 5-ton Dump Truck, M1090	T64911	17	
HEMTT Fuel Tanker, 2500gal, M978	T87243	24	
Truck Tractor, 14-ton LET, M916	T91656	18	
HMMWV Armt Carrier, Armd, M1025	T92242	17	
LMTV 2.5-ton Cargo Truck, M1079	T93484	12	
MTV 5-ton Wrecker, M1089	T94709	10	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016
Aircraft			
RQ-11 (RAVEN)		$2,669,000	$2,480,000
UH-60 Blackhawk M Model (MYP)		114,252,000	
CH-47 Helicopter		198,000,000	
Modification of Aircraft			
Utility/Cargo Airplane Modifications	$4,674,000	5,434,000	6,220,000
Modification of Missiles			
Improved Target Acquisition System (ITAS) / TOW Modifications			446,000
Weapons and Tracked Combat Vehicles (WTCV)			
M88 Family of Vehicles (FOV) Modifications			4,475,000
Joint Assault Bridge			20,700,000
XM320 Grenade Launcher Module (GLM)	1,209,000	1,786,000	1,495,000
Common Remotely Operated Weapons Station	6,180,000	6,180,000	6,180,000
M2 .50 cal Machine Gun Modifications		8,660,000	12,660,000
Tactical and Support Vehicles			
Tactical Trailers/Dolly Sets	800,000	2,376,000	3,360,000
Truck, Dump, 20 ton (CCE)			3,656,000
Family of Medium Tactical Vehicles (FMTV)	63,628,000		
Family of Heavy Tactical Vehicles (FHTV)	4,820,000	3,379,000	1,658,000
Palletized Load System (PLS) Extended Service Program (ESP)		3,342,000	16,900,000
Heavy Expanded Mobile Tactical Truck (HEMTT) Extended Service Program (ESP)	39,525,000	12,119,000	16,749,000
Modification of In-service Equipment	4,403,000	17,159,000	19,734,000
Communications and Electronics Equipment			
Warfighter Information Network-Tactical (WIN-T) - Ground Forces Tactical Network	2,441,000	4,694,000	7,549,000
Global Broadcast Service (GBS)	2,100,000		
Family of Medical Communications for Combat Casualty Care	12,461,000	13,858,000	16,415,000
Reserve Civil Affairs (CA)/Military Information Support Operations (MISO) GPF Equipment	61,096,000	46,563,000	57,202,000
Telecommunications Security (TSEC) - Army Key Management System (AKMS)		278,000	277,000
Information Systems Security Program (ISSP)	707,000	849,000	271,000
Communications Security (COMSEC)	1,201,000	1,430,000	1,207,000
Night Vision Devices	10,987,000	22,935,000	984,000
Night Vision, Thermal Weapon Sight		3,789,000	5,529,000
Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Range Finder (MLRF)	1,000,000		
Green Laser Interdiction System (GLIS)	500,000		

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Table 3

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2014	FY 2015	FY 2016
Battle Command Sustainment Support System (BCS3)	8,823,000		
Air & Missile Defense Planning and Control System (AMDPCS)	3,924,000	9,990,000	4,506,000
Network Management Initialization and Service	6,039,000	6,268,000	1,367,000
Maneuver Control System (MCS)	20,663,000	16,777,000	30,335,000
Global Combat Support System - Army (GCSS-A)	26,458,000	54,694,000	47,212,000
Reconnaissance and Surveying Instrument Set	6,540,000	6,600,000	5,634,000
Items less than $5M (Surveying Equipment)		1,505,000	1,252,000
Other Support Equipment			
Family of Non-lethal Equipment (FNLE)	130,000		
Base Defense Systems (BDS)	2,060,000		203,000
Tactical Bridging		3,034,000	6,200,000
Ground Standoff Minefield Detection System (GSTAMIDS)	1,514,000	5,879,000	11,474,000
Robotic Combat Support System (RCSS)		9,722,000	9,274,000
Items Less Than $5M (Countermine Equipment)	105,000	254,000	246,000
Heaters and Environmental Control Units (ECUs)	982,000	4,827,000	5,583,000
Field Feeding Equipment	10,656,000	10,147,000	10,462,000
Cargo Aerial Delivery & Personnel Parachute System	401,000	155,000	
Family of Engineer Combat and Construction Sets	8,155,000	8,154,000	7,714,000
Distribution Systems, Petroleum & Water	1,653,000	4,914,000	18,154,000
Combat Support Medical	3,460,000	23,472,000	1,513,000
Mobile Maintenance Equipment Systems	1,200,000	2,254,000	2,407,000
Items Less Than $5M (Maintenance Equipment)	198,000	223,000	223,000
Scrapers, Earthmoving	6,059,000	3,399,000	5,046,000
Hydraulic Excavator	18,044,000		
Tractor, Full Tracked	4,036,000	3,991,000	5,411,000
All Terrain Cranes	4,966,000	6,363,000	9,700,000
High Mobility Engineer Excavator (HMEE)	2,968,000		
Enhanced Rapid Airfield Construction Capability	2,139,000	3,606,000	2,916,000
Construction Equipment ESP	4,826,000	4,413,000	4,487,000
Items Less Than $5M (Construction Equipment)	1,716,000	2,601,000	3,330,000
Army Watercraft ESP			20,050,000
Generators and Associated Equipment	22,305,000	26,837,000	36,995,000
Family of Forklifts	2,262,000	2,139,000	2,356,000
Training Devices, Nonsystem	5,432,000	3,780,000	11,848,000
Close Combat Tactical Trainer	2,671,000	2,110,000	1,795,000
Aviation Combined Arms Tactical Trainer	4,854,000	4,655,000	4,986,000
Gaming Technology in Support of Army Training	1,493,000	1,142,000	1,369,000
Integrated Family of Test Equipment (IFTE)	3,736,000	3,438,000	3,956,000
Test Equipment Modernization (TEMOD)	2,250,000	2,908,000	2,860,000
Modification of In-service Equipment (OPA-3)	20,675,000	2,015,000	1,543,000
Total	**$431,125,000**	**$712,018,000**	**$488,554,000**

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013
FY 2011 Title IX NGREA Equipment			
Simulators, Collective and Individual	$16,550,000		
Command Post of the Future	22,100,000		
Engineer Equipment	38,151,022		
Material Handling Equipment (MHE)	17,099,600		
Heavy Tactical Vehicles	15,350,000		
Medium Tactical Vehicles	15,077,950		
Civil Affairs & Military Information Support Operations (MISO) equipment	7,786,123		
Test and Diagnostic Equipment	4,287,280		
Power Generation and Distribution Systems	1,977,351		
Medium Tactical Vehicle Trailers	1,619,200		
FY 2012 Title IX NGREA Equipment			
Field Logistics		$75,000,000	
General Engineering		52,000,000	
Heavy Tactical Vehicles		5,000,000	
Force Protection		5,000,000	
Simulators		5,000,000	
Family of Medium Tactical Vehicles (FMTV)		3,000,000	
Total	**$139,998,526**	**$145,000,000**	

1. Service FY 2013 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2013 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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Air Defense					
Center: Communications Operations	C18033		+1	+2	
Computer: Tactical AN/GYQ-88	C77755	+2			
Battle Command and Control (C2)					
Computer Set: AN/UYK-128(V)3	C18378	+784	+237	+19	
Computer System Digital AN/UYQ-90(V)2	C18278	+10			
Distribution System Elec: 120/208V 3ph 40amp	F55485	+30		+66	
Distribution System Elec: 120V 1ph 60amp	F55553	+463	+96	+96	
Gen Set DED TM: 10kW 60Hz	G42170	+7	+1	+28	
Gen Set DED TM: 5kW 60Hz	G42238	+183		+124	
Generator Set Diesel Engine TM: PU-802	G53778	+11		+129	
Loudspeaker NGLS-Mounted	L26899	+14			
Navigation Set: Satellite Signals AN/GSN-13	N96180	+16	+12	+8	
Battlespace Awareness					
Data Analysis Central: AN/MSW-24	D77801	+2			
Battle Command Transportable Networks					
Joint Base Station (JBS): LITE	J00719	+15	+4	+30	
Joint Node Network (JNN) Central Ofc Telephone Auto	J05001	+10			
Radio Set: AN/VRC-90F(C)	R68044	+50	+66	+2	
Receive Suite: AN/TSR-8	R30658		+2		
Satellite Communication System: AN/TSC-156	S23268	+1			
Combat Mobility					
Bridge Heavy Dry: Supt (HDSB) 40m MLC96	B26007	+3			
Loader Skid Steer: Type Ii	L77147	+46			
Mine Protected Clearance Vehicle	M05004	+6	+3	+3	
Mine Resistant Vehicle	M74226	+54	+27		
Munition: Network Command (Spider)	M92387	+3			
Vehicle Mounted Mine Detection (VMMD) System	V05001	+12	+3	+1	
Field Logistics					
Laundry Advanced System: (LADS) Trailer-mounted	L70538	+17			
Load Handling Sys: 2000G Comp Water Tank-Rack (HIPPO)	T32629	+16	+13	+23	
Mobile Integrated Remains: Collection System	M57970	+5			
Rough Terrain Container Handler (RTCH): KALMAR RT240	R16611	+28			
Tank & Pump Unit Liquid Dispensing Truck Mounting	V12141	+36	+31	+7	
Truck Lift Fork: Variable Reach Rough Terrain	T73347	+64			
Water Storage/Distribution Set: 40K GPD (Brigade)	W55968	+2	+1	+2	

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Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Force Protection					
Collective Protection Equipment: NBC Simplified M20	C79000	+4			
Nuclear, Biological, and Chemical (NBC) Recon Vehicle	N96543	+32			
General Engineering					
Comp Unit RCP: Air Rec Gas and DED 88.5cfm 100psi	E69790	+4			
Tool Kit Pipe Cutting Grooving and Beveling	W48485	+5	+3		
Maneuver Systems					
Drivers Enhancers: AN/VAS-5	D41659	+205			
Medical Field Systems					
Computerized Tomography Scanner Field	C79284		+1	+1	
Medical Equipment Set Ground Ambulance	M26413	+2			
Medical Filmless Imaging System	M30817	+17	+3	+1	
Soldier Systems					
Binocular: M25	B67907	+384	+35		
Heavy Weapon Thermal Sight (HWTS): AN/PAS-13(V)3	S90603	+1,319	+442	+45	
Medium Weapon Thermal Sight (MWTS): AN/PAS-13(V)2	S90535	+3,520	+929	+29	
Night Vision Device: AN/PSQ-20	N07848	+892	+1,515	+208	
Sight: Thermal AN/PAS-13B(V)1	S60356	+389		+38	
Soldier Weapons					
Command Launch Unit: (Javelin) 13305405-119	C60750	+14	+6		
Launcher Grenade: M320	L03621	+460	+170	+172	
Launcher Grenade: M320A1	L69080	+908			
Machine Gun: 5.56mm M249	M09009		+251	+16	
Machine Gun 7.62mm: M240L	M92454	+48	+21		
Machine Gun Grenade: 40mm Mk19 Mod III	M92362	+9	+41	+1	
Machine Gun: Caliber 50	M39331	+346	+1,460	+1,460	
Rifle: 5.56mm M4	R97234	+1,333	+1,576	+325	
Support Systems					
Joint Precision Airdrop System: (JPADS)	J00947	+60			
Platform: Container Roll-in/Roll-out	B83002	+11			
Trailers					
Trailer Cargo: MTV w/Dropsides M1095	T95555	+150	+10		
Trailer Flatbed: M1082 Trlr Cargo LMTV w/Dropsides	T96564	+4	+5		
Trailer: Palletized Loading 8X20	T93761	+35	+21	+21	
Trucks					
Truck Cargo: 5-ton WO/W	T41515	+133	+36		
Truck Dump: 10-ton W/W	T65274	+31			
Truck Dump: 10-ton WO/W	T65342	+89	+100		
Truck Wrecker: M984A4	T63161	+46	+14	+15	
Truck: Expandable Van WO/Winch	T67136	+26	+4	+1	

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2010 Planned Transfers & Withdrawals							
USAR indicated no planned transfers or withdrawals in the FY 2010 NGRER.							
FY 2010 P-1R Equipment							
Aircraft Modifications							
Utility/Cargo Airplane Mods				$0	$4,300,000		
Utility Helicopter Mods				0	19,468,000		
Global Air Traffic Management (GATM) Rollup				0	4,507,000		
Anti-tank/Assault Missile Systems							
Javelin (AAWS-M) System Summary				1,923,000	0		
Tracked Combat Vehicles							
Stryker Vehicle				78,551,000	0		
Improved Recovery Vehicle (M88A2 Hercules)				13,200,000	13,200,000		
Joint Assault Bridge				35,661,000	0		
Weapons & Other Combat Vehicles							
M240 Medium Machine Gun (7.62mm)				11,673,000	0		
M249 SAW Machine Gun Mods				0	189,900		
Machine Gun, Cal .50 M2 Roll				4,626,000	4,626,000		
Mk-19 Grenade Machine Gun (40mm)				3,024,000	2,750,000		
XM320 Grenade Launcher Module (GLM)				0	905,000		
M4 Carbine				10,534,000	10,534,000		
Tactical Vehicles							
Tactical Trailers/Dolly Sets				13,811,000	0		
Semitrailers, Flatbed				2,791,000	0		
Semitrailers, Tankers				1,018,000	0		
High Mobility Multipurpose Wheeled Vehicle (HMMWV)				116,663,000	246,599,000		
Family of Medium Tactical Vehicles (FMTV)				363,193,000	621,278,000		
Family of Heavy Tactical Vehicles (FHTV)				286,427,000	319,220,000		
PLS ESP				0	1,236,000		
Armored Security Vehicles (ASV)				18,585,000	18,252,000		
Mine Protection Vehicle Family				122,300,000	81,636,000		
Truck, Tractor, Line Haul, M915/M916				22,221,000	20,505,000		
HEMTT Extended Service Program (ESP)				22,697,000	21,697,000		
Communications and Electronics Equipment							
WIN-T - Ground Forces Tactical Network				44,881,000	21,623,000		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
NAVSTAR Global Positioning System (Space)				10,469,000	15,500,000		
SMART-T (Space)				112,000	13,100,000		
Global Broadcast Service (GBS)				0	606,000		
Spider Apla Remote Control Unit				0	470,000		
Medical Communications for Combat Casualty Care (MC4)				4,991,000	4,976,000		
TSEC - Army Key Mgt System (AKMS)				3,158,000	3,158,000		
Information System Security Program (ISSP)				569,000	1,498,000		
Prophet Ground (MIP)				18,040,000	0		
Night Vision Devices				31,606,000	0		
Night Vision, Thermal Weapon Sight				9,093,000	9,093,000		
Force XXI Battle Cmd Brigade & Below (FBCB2)				6,180,000	6,180,000		
Tactical Operations Centers				3,652,000	3,652,000		
Battle Command Sustainment Support System (BCS3)				0	568,000		
Air & Missile Defense Planning & Control System (AMD PCS)				2,314,000	0		
TC AIMS II				1,851,000	1,851,000		
Maneuver Control System (MCS)				1,025,000	1,025,000		
Single Army Logistics Enterprise (SALE)				2,662,000	0		
CSS Communications				7,331,000	9,531,000		
Other Support Equipment							
Protective Systems				0	1,950,000		
CBRN Soldier Equipment				80,198,000	80,458,000		
Tactical Bridging				14,225,000	0		
Tactical Bridge, Float-ribbon				29,619,000	37,969,000		
Handheld Standoff Minefield Detection System (HSTAMIDS)				0	19,019,000		
Ground Standoff Mine Detection System (GSTAMIDS)				32,323,000	28,815,000		
Heaters and Environmental Control Units (ECUs)				0	2,069,000		
Field Feeding Equipment				16,357,000	18,331,000		
Cargo Aerial Delivery & Personnel Parachute System				4,221,000	4,221,000		
Mobile Integrated Remains Collection System				0	16,534,000		
Distribution Systems, Petroleum & Water				16,577,000	19,427,000		
Water Purification Systems				1,993,000	1,993,000		
Combat Support Medical				12,747,000	13,267,000		
Mobile Maintenance Equipment Systems				27,279,000	27,362,000		
Skid Steer Loader (SSL) Family of Systems				0	7,680,000		
Loaders				2,840,000	2,840,000		
Hydraulic Excavator				0	6,339,000		
Tractor, Full Tracked				10,865,000	10,865,000		
High Mobility Engineer Excavator (HMEE) FOS				1,868,000	1,868,000		
Construction Equipment ESP				0	4,275,000		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Harbormaster Command and Control Center (HCCC)				0	6,110,000		
Generators and Associated Equipment				45,717,000	52,024,000		
Rough Terrain Container Handler (RTCH)				8,492,000	23,985,000		
All Terrain Lifting Army System				9,250,000	22,800,000		
Calibration Sets Equipment				1,340,000	0		
Integrated Family of Test Equipment (IFTE)				4,085,000	5,455,000		
Test Equipment Modernization (TEMOD)				0	807,000		
FY 2010 Title III NGREA Equipment							
Heavy Expanded Mobility Tactical Truck (HEMTT)						$42,371,658	$49,090,942
Route Clearance						7,500,000	7,500,000
Soldier Support (Laundry Advanced System)						6,134,664	0
Material Handling						4,733,361	4,733,361
Tactical Local Area Network (TACLAN)						4,698,000	4,698,000
Power						3,462,596	3,462,596
Liquid Logistics						3,410,736	3,410,736
Command Post (Computer Set)						3,179,544	3,179,544
Field Feeding						3,010,989	2,426,368
Tactical Radios						2,771,650	2,771,650
Power Support						1,574,370	1,574,370
Battlefield Anti-intrusion System						1,021,300	1,021,300
Diagnostic Test Set						417,705	417,705
Enhanced Container Handling Unit						313,200	313,200
Trailer Cargo: High Mobility						302,848	302,848
Weapon Support (Mount Tripod Machine Gun)						69,251	69,251
Tester Density-moisture Soil-Asphalt-Concrete: Nuclear Meth (CCE)						28,004	28,004
Total				**$1,596,828,000**	**$1,900,196,900**	**$84,999,876**	**$84,999,875**

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Table 7

Major Item of Equipment Substitution List

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

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No
Alarm: Chemical Agent Automatic M22	A33020	Alarm: Chemical Agent Automatic M8A1	A32355	1,940	X	
Battlefield Anti-Intrusion Sys: AN/PRS-9	B57077	Platoon Early Warn Sys: AN/TRS-2(V)	P06148	65	X	
Detecting Set: Mine AN/PSS-14	D03932	Detecting Set: Mine AN/PSS-11	G02341	1,290	X	
Dental Equipment Set: Comprehensive Dentistry Field	D43802	DES: General Dentistry Field	D26151	73	X	
Fuel System Supply Point: FSSP	F05034	Fuel System Supply Point: Ptbl 60K-gal	J04717	149	X	
Crane, Truck-mtd, Hyd 25-ton (CCE)	F43429	Crane: Whl-mounted Hydraulic 25-ton All Terrain AT422T	C36586	106	X	
Gen Set: DED Trailer PU-807A	G17528	Gen Set: DED TM 100kW 60Hz PU-495	J35801	94	X	
Gen Set: DED TM PU-803	G35851	Gen Set: DED TM 30kW 60Hz PU-406	J36383	60	X	
Gen Set: DED TM 5kW 60Hz	G42238	Gen Set: DED TM 5kW 60Hz PU-751/M	G37273	69	X	
Gen Set: DED Trailer-mtd (TM) PU-802	G53778	Gen Set: DED TM 15kW 60Hz PU-405	J35492	53	X	
Gen Set: DED Trailer-mtd (TM) PU-802	G53778	Gen Set: DED TM 30kW 60Hz PU-406	J36383	60	X	
Electronic Shop Avionics: AN/ASM-146	H01907	Electronic Shop Avionics: AN/ASM-189	H01855	62	X	
KY-99: Miniterm	K47623	Speech Security Equip: TSEC/KY-57	S01373	356	X	
Launcher Grenade: M320	L03621	Launcher Grenade: 40mm Rifle-mtd	L44595	5,469	X	
Night Vision Goggle: AN/PVS-7B	N05482	Night Vision Goggles: AN/PVS-5	N04456	231		X
Radio Set: AN/VRC-89F(C)	R44999	Radio Set: AN/VRC-89A	R44863	862	X	
Radio Set: AN/VRC-89F(C)	R44999	Radio Set: AN/VRC-89D	R44931	246	X	
Radio Set: AN/VRC-92F(C)	R45543	Radio Set: AN/VRC-92A	R45407	568	X	
Radio Set: AN/VRC-92F(C)	R45543	Radio Set: AN/VRC-92D	R45475	173	X	
Radio Set: AN/VRC-87F(C)	R67296	Radio Set: AN/VRC-87A	R67160	55	X	
Radio Set: AN/VRC-88F(C)	R67330	Radio Set: AN/VRC-88A	R67194	1,054	X	
Radio Set: AN/VRC-88F(C)	R67330	Radio Set: AN/VRC-88D	R67262	109	X	
Radio Set: AN/VRC-90F(C)	R68044	Radio Set: AN/VRC-90A	R67908	5,520	X	
Radio Set: AN/VRC-90F(C)	R68044	Radio Set: AN/VRC-90D	R67976	2,018	X	
Radio Set: AN/VRC-91F(C)	R68146	Radio Set: AN/VRC-91A	R68010	848	X	
Radio Set: AN/VRC-91F(C)	R68146	Radio Set: AN/VRC-91D	R68078	145	X	
Radio Set: AN/PRC-119F(C)	R83141	Radio Set: AN/PRC-119A	R83005	829	X	
Radio Set: AN/PRC-119F(C)	R83141	Radio Set: AN/PRC-119D	R83073	85	X	
Sanitation Center: Food	S33399	Heater Immersion Liquid Fuel Fired	K25342	1,016	X	
Truck Cargo: MTV W/W	T41135	Truck Cargo: Dropside 5-ton 6X6	X40794	2,141		X
Truck Cargo: MTV W/W	T41135	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	461		X
Truck Van: Expansible MTV M1087A1	T41271	Truck Van: Expansible 5-ton 6x6	X62237	122		X
Truck Cargo: LMTV	T60081	Truck Cargo: Dropside 5-ton 6X6	X40794	2,141		X
Truck Cargo: LMTV	T60081	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	461		X
Truck Cargo: LMTV W/W	T60149	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	461		X

USAR
Major Item of Equipment Substitution List

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No
Truck Tractor: MTV	T61239	Truck Tractor: 5-ton 6X6	X59326	905		X
Truck Tractor: MTV	T61239	Truck Tractor: 5-ton 6X6 W/W	X59463	96		X
Truck Tractor: M1088A1P2 W/W	T61375	Truck Tractor: 5-ton 6X6 W/W	X59463	96		X
Truck Cargo: MTV	T61908	Truck Cargo: Dropside 5-ton 6X6	X40794	2,141		X
Truck Cargo: MTV	T61908	Truck Cargo: Dropside 5-ton 6X6 W/W	X40931	461		X
Truck Dump: MTV	T64911	Truck Dump: 5-ton 6X6	X43708	451		X
Truck Dump: MTV	T64911	Truck Dump: 5-ton 6X6 W/W	X43845	65		X
Truck Dump: MTV W/W	T64979	Truck Dump: 5-ton 6X6	X43708	451		X
Truck Dump: MTV W/W	T64979	Truck Dump: 5-ton 6X6 W/W	X43845	65		X
Truck: Expandable Van WO/Winch	T67136	Truck Van: Expansible 5-ton 6x6	X62237	122		X
Truck Utility: ECV Up-Armored (HMMWV)	T92446	Truck Utility: Armt Carrier Armored W/W (HMMWV)	T92310	236		X
Truck Wrecker	T94671	Truck Wrecker: 5-ton 6X6 W/W	X63299	205		X
Truck Wrecker: MTV W/W	T94709	Truck Wrecker: 5-ton 6X6 W/W	X63299	205		X
Ventilator Volume Portable	V99788	Ventilator Volume Portable	V99538	188	X	
Tractor FT HS: Armored Combat Earthmover (ACE)	W76473	Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Winch	W76816	240	X	
Air Conditioner: 36K BTUH Horizontal	Z03653	Air Conditioner: FL/Wall 36K BTU	A24763	138	X	

USAR

Table 8

Significant Major Item Shortages

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

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	Tactical Medium Truck	10,198	3,240	$291,272	$943,720,051	25% of USAR fleet still comprised of legacy 800/900 series vehicles that are non-deployable for current combat operations.
2	Tactical Light Truck	20,694	3,854	$190,134	$732,778,120	14% of Tactical Light Truck capability resides in USAR.
3	CBRN Reconnaissance	156	135	$4,106,580	$554,388,273	14% of Chemical, Biological, Radiological, and Nuclear (CBRN) Reconnaissance capability resides in USAR.
4	Tactical Radios	54,827	29,390	$17,035	$500,651,289	8% of Tactical Radio capability resides in USAR.
5	Tactical Networks	463	152	$3,184,400	$484,028,750	Consists of critical command and control (C2) systems used for full spectrum operations across all unit types. Mission Command systems also in high demand for homeland defense (HD) and defense support of civil authorities (DSCA) operations.
6	Heavy Expanded Mobility Tactical Truck (HEMTT)	2,244	790	$500,606	$395,478,531	8% of HEMTT capability resides in USAR.
7	Logistics Automation	28,514	10,964	$27,929	$306,211,898	12% of Logistics Automation resides in USAR.
8	Countermine - Mine Detection and Clearing	3,148	1,751	$169,769	$297,265,400	7% of the Countermine capability resides in USAR.
9	Medical Materiel	6,641	3,933	$68,551	$269,610,382	22% of Hospital Equipment capability resides in USAR.
10	Tactical Heavy Truck	3,199	942	$171,278	$161,343,876	30% of the on-hand Tactical Heavy Truck capability resides in the USAR.

Chapter 3
United States Marine Corps Reserve

I. Marine Corps Overview

Whether fighting at sea or ashore, Marines have been guided by *honor, courage and commitment*. These core values have been the compass for every Marine's service throughout our rich history. Superior leadership, hard training, and a willingness to sacrifice have forged our Corps into one of the most capable fighting forces the world has ever known. Our Marine Corps has remained true to these values for 237 years.

"During the past year, Marines have conducted counterinsurgency operations in Afghanistan, and have responded to a rapid succession of unpredicted political upheavals, natural disasters, social unrest, piracy and emerging threats in various unstable areas of the world's littoral regions."[1] Marine forces operate in a "lane" that passes through *all* domains—land, sea, air, space and cyber—operating capably and freely throughout the spectrum of threats, whether they be conventional, hybrid, or irregular.

Whereas other forces are optimized for a particular mission and domain, the Marine Corps is optimized for rapid deployment, versatile employment, and self-sustainment via Marine Air-Ground Task Forces (MAGTFs). All MAGTFs consist of four core elements: a Command Element, Ground Combat Element, Aviation Combat Element, and Logistics Combat Element. Bridging a seam in our Nation's defense between heavy conventional and special operations forces (SOF), the United States Marine Corps is light enough to arrive rapidly at the scene of a crisis, but heavy enough to carry the day and sustain itself upon arrival.

"The Corps of today and tomorrow will maintain its high standards of training, education, leadership and discipline, while contributing vital capabilities to the Joint Force across the spectrum of military operations."[2]

A. Marine Corps Planning Guidance

1. Strategic Concept of the Marine Corps

"New strategic guidance issued by the President and the Secretary of Defense provides the framework by which the Marine Corps will balance the demands of the future security environment with the realities of our current budget. The guidance calls for a future force that will 'remain capable across the spectrum of missions, fully prepared to deter and defeat aggression and to defend the homeland and our allies in a complex security environment.'"[3] Our sustained efforts in Iraq and Afghanistan demonstrate our resolve to meet the Nation's call.

2. Marine Corps Total Force Concept

Within the Marine Corps, the Active Component (AC) and Reserve Component (RC) are integrated as a total force. Through the employment of the concept of "mirror-imaging," AC and

[1] *The Posture of the United States Marine Corps*, February 2012, pg. 1
[2] *The Posture of the United States Marine Corps*, February 2012, pg. 2
[3] *The Posture of the United States Marine Corps*, February 2012, pg. 3

RC forces are manned, trained, and equipped to the same standards, thereby enabling RC forces to be seamlessly employed as part of the Marine Corps operating forces. The RC stands ready to give strategic depth, and to provide operational augmentation to America's expeditionary force in readiness.

B. Marine Corps Equipping Policy

The Marine Corps develops an Approved Acquisition Objective for each new item of equipment using an integrated system of dynamic processes that capitalizes on recent operational experiences to meet the emerging needs of Marine forces in support of combatant commander requirements. To ensure adequate equipment support to current operations in Afghanistan, while maintaining a viable cost-effective strategy for force rotations, key operational equipment has been identified to remain in theater. The Marine Corps has moved to the Push Fulfillment Process for sustainment of Principal End Items (PEIs) rather than a Unit Procurement (Pull) Process. This new materiel management approach ensures that PEIs are sourced and aligned with the Commandant of the Marine Corps' (CMC) equipping strategies. It also reduces latency in distribution, improves visibility and transparency of the materiel distribution process, and ensures assets are distributed in accordance with CMC established priorities.

C. Plan to Fill Mobilization Shortages in the RC

Reserve units maintain equipment based upon the unit's Training Allowance (T/A), which is a portion of the warfighting equipment requirement set forth in the unit's Table of Organization and Equipment (TO&E). Marine Corps Systems Command procures equipment for the RC, with all excess equipment above the T/A maintained "in-stores" at Marine Corps Logistics Bases. In-theater assets, in conjunction with pre-positioned equipment, can be used to satisfy the resourcing of the delta of TO&E minus T/A for activated units. Throughout Operations Iraqi Freedom and Enduring Freedom, this methodology for "global sourcing" has been used to satisfy both AC and RC unit equipment shortfalls.

D. Initiatives Affecting RC Equipment

The Force Structure Review Group (FSRG) directed a strategic review of warfighting requirements and capabilities, in addition to the geographic re-positioning of RC units in response to the evolving demographics of our Nation. As of September 2012, RC units have begun to realign equipment and supporting structure in conjunction with FSRG implementation. As the location and capability sets of units across the RC change, the equipment required to support their missions will also change. Furthermore, the transition of four different legacy supply and logistics systems to the new commercial off-the-shelf (COTS), Oracle based, Global Combat Support System-Marine Corps (GCSS-MC) will change how the Marine Corps Supply/Logistics community supports the total force for the next century. The near real-time information the system provides will give Marines vastly improved asset visibility, reduced customer wait time, and a lighter, more mobile fighting force. The transition to GCSS-MC for the RC began in September 2011 and was completed in December 2012.

E. Plan to Achieve Full Compatibility between AC and RC

Concurrent horizontal fielding of new equipment to the AC and RC by Marine Corps Systems Command maintains common and interchangeable capability sets within the Total Force. This

fielding policy complements our concept of “mirror–imaging” and Push Fulfillment for sustainment, greatly optimizing equipment supportability and associated unit operational readiness.

II. Marine Corps Reserve Overview

Top RC Equipping Challenges

- Implementing results of strategic review from Force Structure Review Group (FSRG)
- Transitioning the KC-130 platform

A. Current Status of the Marine Corps Reserve

1. General Overview

The RC is an integral element of the Marine Corps Total Force. The RC shares the deployment and expeditionary culture that has dominated the Marine Corps ethos for more than two centuries. Accordingly, our Reserve units are organized, trained, and equipped in the same manner as their AC counterparts and are operationally interchangeable with them. All Marines stand ready to answer this Nation's call to arms.

Since September 11th, 2001, Ready Reserve Marines have executed over 80,000 sets of mobilization orders. This operational tempo showcased the Marine Forces Reserve evolution from a strategic to an operational force, capable of simultaneously fulfilling both roles. In the operational role, Marine Forces Reserve has sourced preplanned, rotational, and routine combatant command (COCOM) and Service requirements across a variety of military operations. The RC has routinely supported operations in Afghanistan and Iraq while concurrently sourcing COCOM requirements, such as Special Purpose Marine Air Ground Task Force Africa in support of U.S. Africa Command; Black Sea Rotational Force in support of U.S. European Command; Unit Deployment Program in support of U.S. Pacific Command; and Southern Partnership Station in support of U.S. Southern Command. Additionally, Marine Forces Reserve continues to perform its strategic role with COCOM exercise involvement and focused readiness that coherently enables a rapid transition to operational roles in support of major contingency operations.

As the RC continues to implement the FSRG decisions and relocates units, the transfer and maintenance of the corresponding equipment remains an equipping and maintenance challenge for the force. As additional capabilities are increased within the RC, the requirement to sustain the associated equipment has also increased. The initial analysis indicated that RC units would be impacted, and the FSRG transitioning process will require at least four more years to be fully implemented. This ensures the most efficient transfer of equipment, while sustaining enduring programs for maintenance, will remain an equipping challenge.

The KC-130J has already been fielded to the AC Marine Corps while the KC-130T will remain in service in the RC until beyond the year 2020, with the first RC KC-130J not scheduled for delivery until 2015. These two aircraft are very different airframes, each having completely different logistical, maintenance, and aircrew requirements. The longer we maintain both airframes, the longer we have to invest in twice the logistics, maintenance training, and aircrew training. The total cost to purchase all 28 RC KC-130J required aircraft is more than $2B. Currently, only five of the 28 airframes are programmed across the Future Years Defense Program (FYDP).

2. Status of Equipment

Reserve equipment inventory levels continue to rise to meet Reserve training requirements. The National Guard and Reserve Equipment Appropriation (NGREA) remains a significant force multiplier for the RC. NGREA directly impacts the Marine Corps Reserve's ability to train by

allowing the Reserve to purchase or accelerate the fielding of mission essential items. The CMC signed the Service's Ground Equipment Reset Strategy on January 1, 2012. This strategy resets the force in support of the Commandant's reconstitution objectives. As the executive agent for the execution of this strategy, Marine Corps Logistics Command will ensure the timely and responsive reset of RC equipment to maintain a high state of readiness across the force. The unique geographic dispersion of our Reserve units and their limited capacity to store and maintain the total warfighting equipment set onsite underscores the unique relationship between Marine Corps Logistics Command and our Reserve units. This relationship assures high training readiness by using a specific training allowance at Reserve Training Centers while maintaining the remainder of the warfighting requirement in enterprise-managed facilities. This strong relationship, which is necessary for a viable operational reserve, is inherent in the Service's reset strategy. Marine Forces Reserve will continue to meet the Commandant's first priority—provide the best trained and equipped Marine units to Afghanistan—while protecting the enduring health of the operational reserve. The RC has been able to ensure units augmenting and reinforcing the AC are as proficient as their AC counterparts. The NGREA is a critical resource solution for the RC.

a. Equipment On-hand

The equipment on-hand, outlined in *Table 1*, reflects the items expected to be on-hand in the RC beginning in FY 2014. It does not capture the equipment that is available for global sourcing to meet the full wartime requirement and meet the delta between TO&E and the T/A. The majority of the $747M delta between the on-hand quantities and the wartime requirements is not a deficiency that has resulted from a lack of procurement funding. Rather, it is a result of the need for prioritizing fielding to meet operational requirements. The Marine Corps has maintained the RC's ability to train through its use of a training allowance that is not routinely utilized to source operational requirements. The items listed in *Table 8* reflect the programs that will directly enhance the RC's current training allowance.

b. Average Age of Major Items of Equipment

Table 2 provides the average age of selected major equipment items. The average age of RC equipment is consistent with equipment in the AC. The majority of ground combat systems that are at the end of their life cycle have new equipment fielding already planned or have programs of record that are working towards a replacement.

c. Compatibility of Current Equipment with Active Component

Equipment compatibility between the AC and RC is closer than ever. Most existing cases where compatibility is lacking are a result of fiscal constraints that have delayed the RC fielding of new equipment programs. The Marine Corps continues to use NGREA funding to help accelerate the RC fielding of new equipment programs. As outlined later in this chapter, the positive impact of NGREA on improving Total Force compatibility cannot be overstated. Complete compatibility is difficult to achieve due to high equipment demand for force generation training support and application of funds against evolving higher priority requirements.

d. Maintenance Issues

The maintenance and sustainment of RC equipment remains a challenge. Minimal full-time active duty support and limited time to train and work on equipment require ingenuity, resources, and detailed maintenance management. Sufficient funding must be programmed to sustain the materiel readiness and capability of legacy systems and new acquisitions. The consistent high state of equipment readiness in the RC is due to the hard work of skilled Marines and Congressional funding to provide resources for maintenance and spare parts. Programs and initiatives that help maintain and improve the materiel readiness of the systems in the RC include:

- use of leveraging multiple outsourced methods of maintenance to further extend equipment service life throughout the force.

- use of mobile preventive maintenance capability supported by Marine Corps Logistics Command that primarily targets engineer and motor transport equipment.

- the Marine Corps Enterprise Level Maintenance Program, which enhances equipment readiness across the total force. It enables the RC to proactively articulate its depot-level maintenance requirements. As more equipment returns from overseas operations, RC depot-level maintenance requirements will have to compete with the reconstitution effort.

- contracted Small Arms Repair Team to augment the maintainers in preventive maintenance checks and services, performing annual gauging and pre-fire inspections necessary for sustained marksmanship training.

- contracted logistics services for Above Ground Wash Systems and Expeditionary Wash Systems to assist in corrosion control.

- Corrosion Prevention and Control team support through Marine Corps Systems Command to refurbish equipment and apply anti-corrosion compounds to arrest corrosion-related degradation of equipment.

e. Modernization Programs and Shortfalls

The Marine Corps modernization programs are designed to keep pace with the ever-changing character of current and future operations. The RC uses various funding sources to execute these programs and fill equipment shortfalls.

- Training and Simulators: The Marine Forces Reserve strives 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. Through the use of NGREA, the RC has been able to procure aircraft Flight Training Devices (FTDs). The addition of these FTDs and their linkage via the Aviation Virtual Training Environment (AVTE) will allow aircrews to conduct more sorties via the simulator/training device and train with other units and aircrews as a way to reduce costs in a resource-constrained environment. The Marine Corps continues to evaluate new training and simulation technologies to identify cost-effective training options.

- Combat Equipment Modernization: The Marine Corps' various combat equipment modernization programs are providing the RC with the latest generation of warfighting capabilities. These programs include: the A2 upgrade to the Light Armored Vehicle (LAV) family, the development of the Joint Light Tactical Vehicle, and the Logistics Vehicle System Replacement fleet. The majority of the Marine Corps' combat equipment modernization programs are already in the fielding phase or within the final phases of acquisition.

- Aviation Modernization: The RC is also included in the Marine Corps Aviation Plan. During the current FYDP, Reserve squadrons will begin the transition from the KC-130T to the KC-130J, the CH-46E to the MV-22B, and the UH-1N to the UH-1Y, subject to available resources. The RC has historically utilized NGREA funding to procure aircraft and provide upgraded capabilities to existing aircraft where applicable.

- Command and Control (C2) Modernization: C2 modernization remains a top priority for the Marine Corps Reserve. Continued investment in current and emergent C4-related programs and infrastructure will enable the Marine Corps Reserve to sustain its high level of operational readiness in support of global mission requirements. Additional funding applied to programs such as the Blue Force Tracker Global Positioning System, the Lightweight Multi-Band Satellite Terminal (LMST) V2, and the Data Distribution System Module, will accelerate the fielding of several critical tactical communications systems. Furthermore, the procurement and integration of an enterprise data center for the Reserves will further complement and enhance the Marine Corps' Next Generation Enterprise Network (NGEN) Information Technology (IT) network architecture/infrastructure, enabling greater garrison C2 through improved network performance and data reliability.

f. Overall Equipment Readiness

Equipment readiness of RC units remains consistent with AC reporting levels. The RC continues to effectively maintain its T/A in a high state of operational readiness.

B. Changes since the Last NGRER

In December 2012, the RC completed initial implementation of the GCSS-MC, a new system within the Marine Corps' Enterprise Resource Planning System. GCSS-MC will significantly improve inventory management and asset accountability. At any time, in any place, Marines will have the most accurate, near real-time logistics information necessary to win the battles in the 21st century.

C. Future Years Program (FY 2014–FY 2016)

1. FY 2016 Equipment Requirements

The Marine Corps' policies towards Total Force equipping have allowed the RC to remain on equal footing with regards to the fielding of new equipment and equipment modernization. RC equipment requirements are determined by the Deputy Commandant, Combat, Development and Integration who approves a single Total Force acquisition objective for the Service that 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 flexibility in determining fielding priorities that impact training and combat operations. The RC competes equally with the AC for fielding decisions.

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 to participate in amphibious and land assault operations, provide medium cargo lift, and perform 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 begin transitioning to the MV-22 in FY 2013 with a completion date slated for the 4th quarter of FY 2018. The Marine Medium Helicopter Squadron 764 (HMM-764) is scheduled to begin its transition in the 3rd quarter of FY 2013 with HMM-774 beginning its transition in the 3rd quarter of FY 2016. The RC MV-22B transition schedule is an important goal for the Marine Corps.

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 completed the KC-130J transition in FY 2009, leaving 28 RC KC-130T aircraft yet to begin transition to the KC-130J. Current policies prohibit the employment of the legacy aircraft in Operation Enduring Freedom. Budget challenges, resulting from competing Aviation Procurement Navy appropriation priorities within the Navy and Marine Corps, have resulted in a delay of five years in the fielding of the KC-130J to the RC. Fielding is scheduled to begin with five aircraft being delivered to the RC starting in FY 2015. Five aircraft are programmed for the current FYDP and 13 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. It is also the most expensive Reserve 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 (CDD) 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 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 forces, 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 4th Marine Aircraft Wing (MTACS-48, MASS-6 detachments A&B, and MACS-24) in the second quarter of FY 2013. Phase II of the program will provide increased common operating picture capabilities and is under acquisition development. The timeline for Phase II CAC2S fielding is still to be determined.

3. Anticipated Transfers from AC to RC

There are no anticipated transfers from the AC to the RC during FY 2014.

4. Anticipated Withdrawals from RC Inventory

Three AH-1W aircraft were removed from the RC inventory for foreign military sales in FY 2012. These aircraft will be replaced starting in FY 2016, in synchronization with the AC AH-1Z fielding.

5. Equipment Shortages and Modernization Shortfalls at the End of FY 2016

The RC wartime requirements are addressed in *Table 1*, which delineates the major item shortfalls that are anticipated to exist at the end of FY 2016. This table does not reflect the on-hand equipment within the training allowance but the RC wartime requirement. *Table 8* presents the RC's ten highest priority unfunded equipment and modernization shortfalls affecting Reserve unit training allowances.

D. Summary

The Marine Corps is improving its Total Force integration and expeditionary capability. The RC is an operationally effective force, capable of augmenting, reinforcing, and sustaining the AC. While there are challenges before us, such as modernizing the RC with KC-130Js, quickly fielding new ground combat equipment, and developing technologies that allow better communication and logistics support, the Marine Corps Total Force stands ready to protect and defend our Nation. The successful completion of our force structure review, concurrent with the

above activities, will enable the RC to possess the assets to accomplish its mission to augment and reinforce the AC. The Marine Corps' Total Force fielding concept provides the latest generation of combat equipment at the same rate provided to the AC and takes care of our greatest asset—the outstanding men and women who wear the Marine Corps uniform.

USMCR

Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve Component. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Aircraft							
Aircraft, Fighter/Attack, F/A-18A+	F/A-18A+	$54,436,016	15	15	15	15	13
Aircraft, Refueling/Cargo, KC-130J	KC-130J	$80,121,410	0	0	0	1	1
Aircraft, Refueling/Cargo, KC-130T	KC-130T	$45,480,270	28	28	28	27	27
Aircraft, Utility/Cargo, UC-12W	UC-12W	$10,000,000	2	2	2	2	2
Aircraft, Utility/Cargo, UC-35C/D	UC-35	$8,179,661	5	5	5	5	5
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
Helicopter, Attack, AH-1W	AH-1W	$18,935,714	12	12	12	15	18
Helicopter, Cargo, CH-46E	CH-46E	$14,983,188	26	13	13	13	13
Helicopter, Cargo, CH-53E	CH-53E	$37,658,528	6	6	6	6	6
Helicopter, Utility, UH-1N	UH-1N	$7,061,681	12	6	3	3	3
Helicopter, Utility, UH-1Y	UH-1Y	$30,826,000	0	6	9	9	9
RQ-7B Shadow System	RQ-7B	$22,433,000	1	2	3	3	6
Tiltrotor, Cargo, MV-22B	MV-22B	$83,763,000	0	2	6	12	12
Flight Training Device, CH-53E	CH-53E FTD	$14,000,000	0	0	0	0	1
Flight Training Device, KC-130J	KC-130J FTD	$25,000,000	0	2	2	2	2
Flight Training Device, MV-22B	MV-22B FTD	$12,000,000	0	0	0	0	2
Flight Training Device, UH-1	UH-1 FTD	$16,500,000	0	0	0	1	3
Communications & Electronics							
Theater Battle Management Core System, AN/TYY-2	A0013	$277,468	1	1	1	1	1
Central Comm Airborne Sys (DASC-A), AN/UYQ-3B	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	4	4	4	3	3
Teams Antenna	A0061	$87,000	86	86	86	100	106
Radio Set, AN/MRC-148	A0067	$53,234	155	155	155	166	210
AN/GRC-256A, Radio Set, HF	A0068	$40,000	2	2	2	2	4
AN/TSR-9 E88XR Global Broadcast System TGRS	A0090	$194,063	13	13	13	13	36
Radio Set, AN/VRC-110, 50W	A0097	$14,000	855	855	855	960	1,718
Survey Instrument, Azimuth, M111	A0116	$150,000	10	10	10	10	10
Satellite Comm Terminal, Phoenix AN/TSC-156	A0122	$1,813,000	3	3	3	3	10
Remote Subscriber Access Module (RSAM) AN/TTC-63	A0124	$69,886	127	127	127	127	161
Deployable End Office Suite	A0125	$461,217	33	33	33	33	47

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Radio System, AN/VRC-103(V)2	A0126	$39,000	241	241	241	339	1,182
Radio Set, AN/PRC-152(V3)	A0129	$4,800	859	859	859	859	1,834
Deployable Integrated Transport Suite (DITS)	A0132	$302,104	19	19	19	23	33
Tactical Exploitation Group Remote Workstn (TEG-RWS)	A0138	$76,431	3	3	3	3	64
Radio Set, AN/TRC-209	A0139	$47,828	72	72	72	72	102
Antenna, Communication, Trailer-mtd, AS-4429D/TSC	A0149	$495,000	1	1	1	1	9
Radio Set, AN/MRC-142C	A0153	$224,839	39	40	40	59	59
DDS-R/M Comm Security Module (CSM)	A0173	$46,630	21	21	80	88	97
DDS-R/M LAN Service Module (LSM)	A0174	$92,330	24	80	80	90	194
DDS-R/M Configuration Module (CM)	A0175	$2,597	24	80	80	94	97
DDS-R/M LAN Extension Module ON-704/TYC	A0176	$27,930	96	272	272	376	338
DDS-R/M Application Server Module (ASM), AN/TYQ-147	A0177	$14,980	24	80	80	92	97
Beyond Line of Sight Gateway, AN/TYQ-145(V)2	A0180	$140,000	2	2	2	2	2
Support Wide Area Network (SWAN) D (V1)	A0234	$80,000	17	17	17	20	33
SWAN D (V2)	A0241	$90,000	7	7	7	8	13
Satellite Communication Subsystem	A0242	$295,000	4	4	9	9	10
SWAN D Network Package	A0243	$90,000	27	27	27	31	44
Support Wide Area Network MRT	A0244	$105,000	6	6	6	6	11
Combat Ops Center, Set III - AN/TSQ-239(V)3	A0254	$1,848,286	9	9	9	9	12
Combat Ops Center, Set IV - AN/TSQ-239(V)4	A0255	$1,372,700	23	29	29	29	29
Radio Set, AN/VRC-104(V)5	A0266	$50,755	29	29	157	157	157
Combat Operations Center	A0271	$2,500,000	1	1	3	3	3
SCA Multiband Networking Radio	A0336	$28,908	0	0	0	0	469
SCA Multiband Network Veh Radio Sys, AN/VRC-114(V)1	A0352	$17,900	0	0	0	0	329
Digital Tech Control (DTC), Facility, AN/TSQ-227	A0499	$1,213,000	0	5	5	5	7
Sat Terminal, Multiband, LTWT (LMST) Maxi-HUB, AN/USC-65(V)1	A0806	$1,500,000	1	1	1	1	3
Sat Terminal, Multiband, LTWT (LMST) Mini-HUB, AN/USC-65(V)2	A0807	$900,000	1	1	1	1	16
Interrogator, Digital, AN/UPX-37	A0880	$119,150	3	3	3	3	8
Joint Tactical Information Distribution System (JTIDS), AN/URC-107(V)10	A0882	$683,000	4	4	4	4	3
JT Enhanced Core Comm Sys (JECCS)	A0886	$2,543,653	0	0	0	0	5
Tactical Cop Workstation	A0932	$25,000	123	123	123	123	152
Network Manager, EPLRS, AN/PSQ-25	A1225	$5,889	18	18	18	18	24
Antenna, Communication, Trailer-mtd, AS-4429B/TSC	A1380	$425,000	2	2	2	2	5
Radar Set, Firefinder, AN/TPQ-36/46	A1440	$7,500,000	5	5	5	5	5
Radar Set, Air Traffic Control, AN/TPS63B	A1500	$377,777	1	1	1	1	2
Radar Set, LW3D, AN/TPS-59(V)3	A1503	$1,521,756	1	1	2	2	2
Radio Set, AN/GRC-171B(V)4	A1818	$55,874	47	47	47	47	36
Radio Set, AN/MRC-145A	A1957	$43,986	239	239	239	239	286
Radio Set, AN/PRC-150	A2042	$19,247	828	828	828	828	827

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Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Radio Set, Multiband, (Urban)	A2043	$7,115	1,030	1,030	1,030	1,030	872
Radio Set, Multiband, (Maritime)	A2044	$7,431	208	208	755	755	755
Radio Set, Multiband, FALCON II, AN/PRC-117F	A2068	$27,450	900	900	1,001	1,001	1,655
Radio Set, AN/PRC-119F	A2079	$4,346	905	905	905	905	584
Radio Set, EPLRS, AN/VSQ-2D(V)2	A2152	$41,336	274	274	291	291	364
Radio Terminal Digital, Troposcatter, AN/TRC-170	A2179	$1,500,000	15	15	28	28	28
Facility, Anti-Air Warfare, Sector, AN/TYQ-87(V)2	A2390	$427,000	1	1	1	1	3
Tactical Air Ops Module, AN/TYQ-23(V)4	A2525	$8,054,500	6	6	6	6	6
Command System, Tactical, AN/USC-55A	A2551	$280,000	3	3	3	3	6
Advanced Field Arty Tactical Data System, AN/GYK-60	A2555	$45,200	178	178	178	178	174
Target Locator, Designator & Hand-off System (TLDHS) (BLKII), AN/PSQ-19A	A2560	$42,000	157	157	157	157	183
UAV System, Raven RQ-11B	A3252	$100,000	1	45	45	45	87
Communications Interface Sys, AN/MRQ-12(V)3	A3270	$1,214,000	10	10	10	10	5
Interrogator Computer, TSEC/KIR-1C	A8018	$1,499	14	14	14	14	11
Transponder Computer, TSEC/KIT-1C	A8019	$1,254	9	9	9	9	9
Remote Rekey Equipment, KOK13A	A8072	$18,860	4	4	4	4	6
Computer Set, Digital (Blue Force Tracker)	A9001	$15,850	0	0	0	0	1,738
Engineer							
Air Conditioner, 1.5-ton, 60Hz, R-407C	B0003	$9,009	102	102	102	102	106
Environmental Control Unit, HZ1, 18K Btu	B0004	$5,858	6	6	6	6	6
Air Conditioner, MCS Vertical, 400Hz, 36K Btu	B0006	$8,842	7	7	7	7	26
Air Conditioner, 5-ton, 60K Btu	B0008	$20,251	91	91	91	91	150
Air Conditioner, 10T, R-407C	B0010	$33,021	10	10	10	10	12
Environmental Control Unit (Air Conditioner)	B0014	$15,092	371	371	371	371	560
Integrated Trailer ECU	B0018	$90,000	43	43	43	43	9
Hydroseeder, Skid Mounted	B0026	$25,650	3	3	3	3	6
Distribution System, Mobile Elect Pwr, 5kW (Indoor)	B0027	$4,500	159	159	159	159	170
Distribution System, Mobile Elect Pwr, 5kW (Outdoor)	B0028	$7,500	281	281	281	281	332
Distribution System, Mobile Elect Pwr, 15kW	B0029	$8,800	106	106	106	106	117
Distribution System, Mobile Elect Pwr, 30kW	B0030	$16,100	84	84	84	84	91
Distribution System, Mobile Elect Pwr, 100kW	B0031	$28,500	47	47	47	47	51
Distribution System, Mobile Elect Pwr, 300kW	B0032	$22,100	12	12	12	12	12
MRAP Buffalo, Mine Protected Clearing Vehicle, BUFF701	B0035	$1,100,026	0	0	0	0	18
All Terrain Crane (ATC) MAC-50	B0038	$578,000	9	9	9	9	24
Airfield Damage Repair (ADR) Kit, GBE Runway REP	B0039	$450,000	3	3	3	3	9
Mine Roller System, Scout Heavy	B0058	$45,000	0	0	0	0	19
Tractor, Medium	B0060	$325,000	43	44	58	58	58
Tractor, Wheeled, Multipurpose (TRAM) 624K	B0063	$123,508	87	90	90	90	115
Air Conditioner, 60Hz, R-407C	B0074	$10,000	29	29	29	29	47
Grader, Road, Motorized, 120M	B0078	$236,008	14	14	14	14	21

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Boat, Bridge Erection, USCSBMK3	B0114	$249,187	7	7	7	7	63
Bridge, Medium Girder (MGB), Dry Gap	B0152	$964,515	4	4	4	4	12
Bridge, Floating Ribbon, 70-ton	B0155	$3,568,000	6	6	6	6	9
Container Handler, Rough Terrain, KALMAR	B0392	$525,000	4	4	6	6	11
Detector, Mine, Advanced, AN/PSS14 w/TWD	B0476	$19,300	133	133	133	133	0
Excavator, Armored Combat, M9 ACE	B0589	$1,000,000	4	4	4	4	20
Tactical Airfield Fuel Dispensing System (TAFDS), M1966	B0675	$331,061	0	0	0	0	9
Fuel System, Amphibious Assault, M69HC	B0685	$1,238,680	1	3	3	3	12
Generator Set, 3kW, 60Hz, MEP-831A	B0730	$11,000	168	168	191	191	325
Generator Set, 10kW, 60Hz, TQG MEP-803A	B0891	$10,700	179	158	182	182	320
Generator Set, Skid Mtd, 10kW/400Hz, TQG, MEP813A	B0921	$15,304	18	18	18	18	12
Generator Set, 20kW, MMG 25	B0930	$16,380	24	24	24	24	82
Generator Set, 30kW, 60Hz, MEP-005A/805A/B	B0953	$26,000	95	98	159	159	241
Generator Set, Skid Mtd, 30kW/400Hz, TQG, MEP815B	B0971	$24,334	6	6	6	6	4
Generator Ltwt, Man-Portable, MEP513A	B0980	$5,262	99	99	99	99	96
Generator Set, 60kW, 400Hz, Skid Mtd, MEP816B	B1016	$29,793	12	12	12	12	12
Generator Set, 60 kW, 60Hz, MEP-006A/806B	B1021	$26,956	103	103	119	119	178
Generator Set, 100kW, 60Hz, TQG MEP-807A	B1045	$67,000	56	56	56	56	95
Refueling System, Expedient, Helo	B1135	$101,863	3	3	6	6	9
Fuel Pump Module (SIXCON)	B1580	$23,350	36	36	63	63	140
Roller, Compactor, Vibratory, SP, CS563D	B1785	$155,150	6	8	10	10	10
Storage, Tank, Module, Fuel (SIXCON)	B2085	$6,948	122	122	164	164	404
Storage, Tank, Module, Water (SIXCON) MWT166	B2086	$5,524	73	73	158	158	291
Sweeper, Rotary, Vehicle Mounting	B2127	$215,780	5	5	6	6	6
Loader, Backhoe (BHL), 420E IT	B2483	$83,359	29	29	29	29	52
Forklift, Extended Boom	B2561	$85,556	54	67	67	67	134
Rough Terrain Forklift, Light Capacity	B2566	$70,000	66	70	70	70	186
Tactical Water Purification System (TWPS)	B2605	$350,000	15	15	15	15	33
General Supply							
Mask, Oxygen	C2278	$2,400	146	146	146	146	171
Oxygen System, Portable	C2286	$2,495	146	146	146	146	332
Re-breather Unit, Oxygen, PHAOS, OXCON	C2288	$15,400	27	27	27	27	120
Container, Quadruple (QUADCON)	C4433	$3,126	4,094	3,983	3,983	3,983	5,306
Multi Fuel Engine, Non-Gasoline Burning Outboard Engine	C4548	$14,483	71	71	71	71	86
Device, Propulsion, Diver (DPD)	C4549	$77,270	20	20	20	20	37
Parachute, Personnel, Maneuverable (MMPS)	C5649	$16,000	181	181	181	181	256
Raiding Craft, Cmbt, Rubber, Inflatable, F470	C5901	$16,745	47	47	47	47	117
Motor Transport							
Equip Transporter, Semi-Trlr, Lowbed, 50-ton, M870A2E1	D0002	$45,599	0	0	0	0	10
Truck, Cargo, MTVR 7-ton Armored, AMK23	D0003	$239,989	91	91	91	91	466

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Truck, Cargo, MTVR 7-ton Armored, AMK27	D0005	$181,000	0	0	0	0	84
Truck, Dump, MTVR 7-ton Armored, AMK29	D0007	$173,900	2	2	2	2	48
Truck, RTAA, Tractor, 7-ton, W/O Winch, MK31A1	D0009	$220,000	23	23	23	23	19
Tractor, MTVR 7-ton Armored, AMK31	D0013	$220,000	24	24	24	24	50
Truck, Wrecker, MTVR 7-ton Armored, AMK36	D0015	$400,000	5	5	5	5	53
HMMWV, ECV, Enhanced, M1152	D0022	$62,665	231	231	231	231	466
MRAP JERRV, 4X4	D0025	$705,421	0	0	0	0	47
MRAP JERRV, 6X6	D0027	$680,000	0	0	0	0	66
HMMWV, ECV, Armament Carrier, M1151	D0030	$210,000	511	511	511	511	1,486
Truck, Utility: Expand Capacity, G2/GP Vehicle, M1165	D0031	$89,000	42	42	42	42	12
HMMWV, ECV, TOW Carrier, Armored, M1167A1	D0032	$79,188	4	4	4	4	32
HMMWV, ECV, Armored, M1152 (2-Door)	D0033	$177,000	253	253	253	253	162
HMMWV, ECV, C2/General Purpose, M1165	D0034	$179,800	176	176	176	176	225
Truck, Cargo, MTVR 7-ton, MK23/MK25	D0198	$141,022	710	703	703	703	452
Semitrailer, Refueler, 5000 gal., MK970A	D0215	$214,064	21	21	21	21	64
Semitrailer, 40-ton Low-bed, M870	D0235	$61,710	38	31	31	31	52
Trailer, Cargo, Resupply for HIMARS, MK38	D0861	$56,156	34	34	34	34	36
Trlr, Powered, Wrecker/Recovery, 4X4, MK15A1 Mod 0	D0877	$192,000	9	9	9	9	31
Trlr, Powered, 5th Whl, Semi-Trlr, Adapter, MK16A1 Mod 0	D0878	$81,000	35	35	35	35	74
Trlr, Tank, Water, 400 Gal, 1 1/2T, 2-WHL, M149A2	D0880	$12,995	191	191	191	191	266
Truck Cargo 22.5-ton, 10X10, LVSR	D0886	$319,529	56	56	56	56	325
Truck, Tractor, 10X10, LVSR	D0887	$330,000	1	1	1	1	63
HMMWV, Ambulance, 4 Litter, Armored, M997	D1001	$113,998	80	80	80	80	89
HMMWV, Ambulance, 2 Litter, Soft Top, M1035	D1002	$68,212	41	41	41	41	40
Truck, Cargo, MTVR 7-ton XLWB, MK27/MK28	D1062	$238,424	100	100	100	100	146
Truck, Cargo, MTVR 7-ton, MK37 w/Crane	D1063	$404,398	36	36	36	36	36
Truck, Aircraft Crash/Structure Firefighting, A/S32P-19A	D1064	$162,562	6	6	6	6	24
Truck, Dump, RTAA, 7-ton	D1073	$174,699	54	54	54	54	42
Truck, Wrecker, 10X10, LVSR MK15	D1214	$600,000	0	0	0	0	28
Ordnance & Weapons							
Night Sight, Scout Sniper Medium Range	E0020	$8,795	521	475	475	475	481
Range Finder, Laser	E0042	$79,400	39	39	39	39	71
Launcher, Tubular F/GM(TOW), M41A1 SABER	E0055	$1,010,000	73	73	73	73	92
Mk 2 Mod 0 MTRS EOD Talon	E0066	$134,000	0	0	0	0	6
Semi-Automatic Sniper System (SASS), M110	E0103	$8,500	93	93	93	93	198
Circle, Aiming, M2A2	E0180	$3,725	96	96	96	96	96
Command Launch Unit, Javelin M98A1	E0207	$133,063	50	50	50	50	64
Rifle, 7.62MM, M39, Enhanced Marksman Rifle (EMR)	E0311	$4,025	42	42	42	42	44
Sight, Thermal, AN/UAS-12C Hybrid	E0330	$116,014	22	22	22	22	28
Howitzer, 155mm, Towed, Lightweight, M777	E0671	$2,500,000	49	49	49	49	48

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Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Assault Amphibious Vehicle, Command/Communications, AAVC7A1	E0796	$2,000,000	5	5	5	5	13
AAV, Personnel, AAVP7A1	E0846	$2,000,000	42	42	42	42	176
AAV, Recovery, AAVR7A1	E0856	$2,000,000	6	6	6	6	10
Launcher, Assault Rocket, 83mm, MK153 Mod 0	E0915	$31,650	224	224	224	224	243
Launcher, Tubular F/GM (TOW), M220E4	E0935	$75,742	27	27	27	27	26
Light Armored Vehicle, Anti-Tank, LAV-AT	E0942	$2,091,280	12	12	12	12	24
Light Armored Vehicle, Cmnd/Control, LAV-C2	E0946	$3,255,380	5	7	7	7	10
Light Armored Vehicle, 25mm, LAV-25	E0947	$3,224,110	76	76	83	83	88
Light Armored Vehicle, Logistics, LAV-L	E0948	$1,883,020	8	18	18	18	22
Light Armored Vehicle, Mortar, LAV-M	E0949	$2,507,080	10	10	10	10	12
Light Armored Vehicle, Maint/Recovery, LAV-R	E0950	$2,183,920	5	5	7	7	8
Machine Gun, .50 cal., Browning, M2	E0980	$8,118	506	496	496	496	637
Machine Gun, .50 cal., M48	E0984	$13,648	50	51	51	51	100
Machine Gun, Medium, 7.62mm, M240B	E0989	$6,000	1,109	1,103	1,103	1,103	1,461
Machine Gun, 40mm, MK-19 Mod3	E0994	$15,320	429	408	408	408	561
Mortar, 60mm, M224	E1065	$64,652	77	81	81	81	72
Mortar, 81mm, M252	E1095	$121,855	85	84	84	84	76
Velocity System, Muzzle (MVS), M94	E1145	$25,000	18	18	18	18	18
Recovery Vehicle, Heavy, Full-Tracked, M88A2	E1378	$2,748,846	6	6	6	6	22
Rifle, Sniper, 7.62mm, M40A5	E1460	$6,034	116	150	150	150	149
Rifle, Scoped, Special App (SASR), .50 cal.	E1475	$7,500	72	82	82	82	75
High Mobility Artillery Rocket System (HIMARS)	E1500	$2,500,000	18	18	18	18	36
Tank, Combat, Full-tracked, 120mm Gun, M1A1	E1888	$2,393,439	48	48	48	48	84
Test Set, Elect System, Direct Support, AN/USM-615	E1906	$2,274,000	2	2	2	2	5
Sight, Weapon, Thermal, Medium (MTWS)	E1975	$11,300	1,328	1,249	1,249	1,249	1,461
Sight, Weapon, Thermal, Heavy (HTWS)	E1976	$11,999	252	837	837	837	1,198

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.

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Average Age of Equipment

Table 2

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aircraft, Fighter/Attack, F/A-18A+	F/A-18A+	26	
Aircraft, Refueling/Cargo, KC-130T	KC-130T	21	
Aircraft, Utility/Cargo, UC-12W	UC-12W	2	
Aircraft, Utility/Cargo, UC-35C	UC-35C	13	
Aircraft, Utility/Cargo, UC-35D	UC-35D	10	
Aircraft, Fighter, F-5F	F-5F	34	
Aircraft, Fighter, F-5N	F-5N	33	
Helicopter, Attack, AH-1W	AH-1W	17	
Helicopter, Cargo, CH-46E	CH-46E	43	
Helicopter, Cargo, CH-53E	CH-53E	15	
Helicopter, Utility, UH-1N	UH-1N	29	
RQ-7B Shadow System	RQ-7B	5	
Communications/Electronics			
Communications Platform, Air Defense (ADCP)	A0025	11	
Teams Antenna	A0061	7	
Radio Set, AN/MRC-148	A0067	6	
AN/TSR-9 E88XR Global Broadcast System TGRS	A0090	5	
Radio Set, AN/VRC-110, 50W	A0097	4	
Satellite Comm Terminal, Phoenix AN/TSC-156	A0122	5	
Remote Subscriber Access Module (RSAM) AN/TTC-63	A0124	5	
Deployable End Office Suite	A0125	5	
Radio System, AN/VRC-103(V)2	A0126	6	
Radio Set, AN/PRC-152 (V3)	A0129	5	
Deployable Integrated Transport Suite (DITS)	A0132	5	
Radio Set, AN/TRC-209	A0139	6	
Radio Set, AN/MRC-142C	A0153	24	
DDS-R/M Comm Security Module (CSM)	A0173	5	
DDS-R/M LAN Service Module (LSM)	A0174	5	
DDS-R/M Configuration Module (CM)	A0175	5	
DDS-R/M LAN Extension Module ON-704/TYC	A0176	5	
DDS-R/M Application Server Module (ASM), AN/TYQ-147	A0177	5	
Support Wide Area Network (SWAN) D (V1)	A0234	4	
SWAN D (V)2	A0241	4	
Satellite Communication Subsystem	A0242	4	
SWAN D Network Package	A0243	4	
Support Wide Area Network MRT	A0244	4	
Combat Ops Center, Set III - AN/TSQ-239(V)3	A0254	3	

USMCR
Average Age of Equipment

Table 2

Nomenclature	Equip No.	Average Age	Remarks
Combat Ops Center, Set IV - AN/TSQ-239(V)4	A0255	4	
Radio Set, AN/VRC-104(V)5	A0266	2	
Combat Operations Center	A0271	2	
Digital Technical Control (DTC), Facility, AN/TSQ-227	A0499	12	
Radar Set, Firefinder, AN/TPQ-36/46	A1440	13	
Radar Set, LW3D, AN/TPS-59(V)3	A1503	28	
Radio Set, AN/GRC-171B(V)4	A1818	4	
Radio Set, AN/MRC-145A	A1957	10	
Radio Set, AN/PRC-150	A2042	8	
Radio Set, Multiband, FALCON II, AN/PRC-117F	A2068	6	
Radio Set, Manpack, AN/PRC-119F	A2079	11	
Radio Terminal Digital, Troposcatter, AN/TRC-170	A2179	4	
Tactical Air Operations Module, (TAOM), AN/TYQ-23(V)4	A2525	18	
Target Locator, Designator & Hand-off System (TLDHS) (BLKII), AN/PSQ-19A	A2560	3	
Communications Interface System, AN/MRQ-12(V)3	A3270	4	
Engineer			
Air Conditioner, 5-ton, 60K Btu	B0008	4	
Environmental Control Unit (Air Conditioner)	B0014	4	
Integrated Trailer ECU	B0018	5	
All Terrain Crain (ATC) MAC-50	B0038	5	
Tractor, Medium	B0060	5	
Tractor, Wheeled, Multipurpose (TRAM) 624K	B0063	5	
Boat, Bridge Erection, USCSBMK3	B0114	5	
Bridge, Medium Girder (MGB), Dry Gap	B0152	5	
Bridge, Floating Ribbon, 70-Ton	B0155	5	
Container Handler, RT, KALMAR	B0392	5	
Excavator Combat, M9 ACE	B0589	16	
Fuel System Amphibious Assault, M69HC	B0685	6	
Generator Set, 3kW, 60Hz, MEP-831A	B0730	7	
Generator Set, 10kW, 60Hz, TQG MEP-803A	B0891	11	
Generator Set, 30kW, 60Hz, MEP-005A/805A/B	B0953	4	
Generator Set, 60kW, 60Hz, MEP-006A/806B	B1021	4	
Generator Set, 100kW, 60Hz, TQG MEP-807A	B1045	7	
Fuel Pump Module (SIXCON)	B1580	6	
Roller, Compactor, Vibratory, SP, CS563D	B1785	3	
Storage, Tank, Module, Fuel (SIXCON)	B2085	6	
Storage, Tank, Module, Water (SIXCON) MWT166	B2086	6	
Forklift, Extended Boom	B2561	5	
Rough Terrain Forklift, Light Capacity	B2566	4	
Tactical Water Purification System (TWPS)	B2605	5	

USMCR
Average Age of Equipment

Table 2

Nomenclature	Equip No.	Average Age	Remarks
General Supply			
Re-breather Unit, Oxygen, PHAOS, OXCON	C2288	13	
Container, Quadruple (QUADCON)	C4433	16	
Parachute, Personnel, Maneuverable (MMPS)	C5649	6	
Raiding Craft, Cmbt, Rubber, Inflatable, F470	C5901	6	
Motor Transport			
Truck, Cargo, MTVR 7-ton Armored, AMK23	D0003	9	
Truck, Cargo, MTVR 7-ton Armored, AMK27	D0005	9	
Truck, Dump, MTVR 7-ton Armored, AMK29	D0007	9	
Tractor, MTVR 7-ton Armored, AMK31	D0013	9	
Truck, Wrecker, MTVR 7-ton Armored, AMK36	D0015	6	
HMMWV, ECV, Enhanced, M1152	D0022	6	
HMMWV, ECV, Armament Carrier, M1151	D0030	5	
HMMWV, ECV, Armored, M1152 (2-Door)	D0033	3	
HMMWV, ECV, C2/General Purpose, M1165	D0034	3	
Truck, Cargo, MTVR 7-ton, MK23/MK25	D0198	9	
Semitrailer, Refueler, 5000 gal., MK970A	D0215	3	
Semitrailer, 40-ton Low-bed, M870	D0235	11	
Trailer, Cargo, Resupply for HIMARS, MK38	D0861	6	
Truck Cargo 22.5-ton, 10X10, LVSR	D0886	2	
HMMWV, Ambulance, 4 Litter, Armored, M997	D1001	9	
HMMWV, Ambulance, 2 Litter, Soft Top, M1035	D1002	9	
Truck, Cargo, MTVR 7-ton XLWB, MK27/MK28	D1062	9	
Truck, Cargo, MTVR 7-ton, MK37	D1063	4	
Truck, Aircraft Crash/Structure Firefighting, A/S32P-19A	D1064	25	
Truck, Dump, RTAA, 7-ton	D1073	9	
Ordnance & Weapons			
Night Sight, Scout Sniper Medium Range	E0020	3	
Launcher, Tubular F/GM(TOW), M41A1 SABER	E0055	4	
Command Launch Unit, Javelin M98A1	E0207	3	
Sight, Thermal, AN/UAS-12C Hybrid	E0330	38	
Howitzer, 155mm, Towed, Lightweight, M777	E0671	5	
Assault Amphibious Vehicle (AAV), Command/Communications, AAVC7A1	E0796	39	
AAV, Personnel, AAVP7A1	E0846	39	
AAV, Recovery, AAVR7A1	E0856	39	
Launcher, Assault Rocket, 83mm, MK153 Mod 0	E0915	26	
Launcher, Tubular F/GM (TOW), M220E4	E0935	38	
Light Armored Vehicle, Anti-Tank, LAV-AT	E0942	25	
Light Armored Vehicle, Cmnd/Control, LAV-C2	E0946	25	
Light Armored Vehicle, 25mm, LAV-25	E0947	16	

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Average Age of Equipment

Table 2

Nomenclature	Equip No.	Average Age	Remarks
Light Armored Vehicle, Logistics, LAV-L	E0948	24	
Light Armored Vehicle, Mortar, LAV-M	E0949	21	
Light Armored Vehicle, Maint/Recovery, LAV-R	E0950	25	
Machine Gun, .50 cal., Browning, M2	E0980	63	
Machine Gun, .50 cal., M48	E0984	21	
Machine Gun, Medium, 7.62mm, M240B	E0989	17	
Machine Gun, 40mm, MK-19 Mod3	E0994	15	
Mortar, 60mm, M224	E1065	33	
Mortar, 81mm, M252	E1095	26	
Recovery Vehicle, Heavy, Full-Tracked, M88A2	E1378	8	
Rifle, Sniper, 7.62mm, M40A5	E1460	10	
Rifle, Scoped, Special App (SASR), .50 cal.	E1475	17	
High Mobility Artillery Rocket System (HIMARS)	E1500	6	
Tank, Combat, Full-tracked, 120mm Gun, M1A1	E1888	15	
Sight, Weapon, Thermal, Medium (MTWS)	E1975	3	
Sight, Weapon, Thermal, Heavy (HTWS)	E1976	3	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016
Weapons and Combat Vehicles			
Assault Amphibious Vehicle (AAV7A1) Product Improvement Program (PIP)	$351,000	$355,000	$358,000
Light Armored Vehicle (LAV) PIP	954,000	24,840,000	47,583,000
155mm Lightweight Towed Howitzer	597,000	616,000	339,000
High Mobility Artillery Rocket System	1,893,000	3,165,000	3,257,000
Weapons and Combat Vehicles under $5M	1,715,000	817,000	201,000
Modification Kits	4,756,000	3,355,000	2,430,000
Weapons Enhancement Program		8,995,000	
Guided Missiles and Equipment			
Javelin		175,000	134,000
Follow-on to Shoulder-Launched Multipurpose Assault Weapon (SMAW)		919,000	
Anti-Armor Weapons System-Heavy (AAWS-H)	167,000	173,000	176,000
Communications and Electronics Equipment			
Unit Operations Center	2,295,000	2,185,000	2,215,000
Repair and Test Equipment	3,584,000	3,778,000	1,215,000
Combat Support System			18,000
Items under $5M (Communications & Electronics)	39,000	39,000	47,000
Air Operations Command and Control (C2) System	608,000	41,000	2,575,000
Radar Systems	2,142,000	2,561,000	5,477,000
Fire Support System	1,390,000	3,451,000	4,003,000
Intelligence Support Equipment	1,072,000		832,000
RQ-11 Unmanned Aerial Vehicle (UAV)	410,000	411,000	412,000
Distributed Common Ground System (DCGS)-Marine Corps		473,000	
Common Computer Resources	347,000	590,000	913,000
Command Post Systems	3,835,000	6,822,000	3,095,000
Radio Systems	186,000	15,720,000	12,690,000
Communications Switching & Control Systems	4,582,000	10,580,000	3,660,000

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Table 3

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2014	FY 2015	FY 2016
Support Vehicles			
Motor Transport Modifications	1,595,000	1,400,000	720,000
Family of Tactical Vehicles	8,323,000	3,198,000	2,215,000
Engineer and Other Equipment			
Environmental Control Equipment	2,848,000	2,764,000	3,208,000
Bulk Liquid Equipment	3,108,000	3,573,000	1,647,000
Tactical Fuel Systems	3,084,000	6,062,000	1,409,000
Power Equipment Assorted	4,393,000	1,931,000	2,273,000
Amphibious Support Equipment	898,000	200,000	200,000
Material Handling Equipment	4,688,000	3,737,000	987,000
Container Family	1,088,000	822,000	1,228,000
Family of Construction Equipment	3,134,000	1,922,000	1,836,000
Items less than $5M (Engineer)	454,000	241,000	210,000
Spares and Repair Parts			
Spares and Repair Parts	5,000		
Total	**$64,541,000**	**$115,911,000**	**$107,563,000**

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013
FY 2011 Title IX NGREA Equipment			
LAV, Logistics Variant (LAV-L)	$19,150,000		
Combat Convoy Simulators (CCS) Projectors and HW Refurbishment	17,000,151		
Indoor Simulated Marksmanship Trainer (ISMT) refresh systems	11,143,488		
ISMT Rifle Combat Optic (RCO) & Adaptors	1,207,330		
Virtual Combat Convoy Trainer (VCCT) and Reconfigurable Vehicle Simulator (RVS)- Proj/HW Refurbishment	4,700,000		
Combat Vehicle Training System (CVTS), procure spare parts for Amphibious Assault Vehicle (AAV) Turret Trainer	499,996		
M1A1 Abrams Tank Suspension Upgrade Kits	6,000,000		
RQ-11B Raven B/Procurement of DDL Systems (UAV)	5,400,000		
RQ-11B Raven B/ISPS (Spares Package)	609,570		
RQ-11B Raven B/RSTA Kits (Laptop)	180,000		
RQ-11B Raven B/Vampire Licenses (Training Software on RSTA Kit for simulation)	135,000		
RQ-11B Raven B/SASSM GPS (3 per UAV)	135,000		
VSAT/VSAT Network Packages SWAN D	2,199,991		
VSAT/VSAT Small SWAN D (V) 1	1,600,000		
VSAT/VSAT Medium SWAN D (V) 2	39,474		
FY 2012 Title IX NGREA Equipment			
Flight Training Device, UH-1		$33,000,000	
Flight Training Device, CH-53E		14,000,000	
Flight Training Device, MV-22B		12,000,000	
KC-130T Digital Engine Indicator Panels		3,928,571	
KC-130T Electronic Propeller Control System (EPCS)		2,071,428	
Total	**$70,000,000**	**$65,000,000**	

1. Service FY 2013 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2013 will be provided in next year's NGRER.

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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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Helicopter, Attack, AH-1W	AH-1W			+3	Qty 3 directed to FMS in Dec 2011. Will be paid back when AC begins fielding AH-1Z.
Helicopter, Cargo, CH-46E	CH-46E	-13			CH-46Es being replaced with MV-22Bs.
Helicopter, Utility, UH-1N	UH-1N	-6	-3		UH-1Ns being replaced with UH-1Ys.
Aircraft, Refueling/Cargo, KC-130T	KC-130T			-1	KC-130Ts being replaced with KC-130Js.

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2010 Planned Transfers & Withdrawals							
UAV System, Dragon Eye	A3252	-9	-9				
TOW Improved Target Acq Sys, M41A	E0055	+66	+66				
TOW Launcher, M220E4	E0935	-62	-73				
FY 2010 P-1R Equipment							
AAV7A1 Product Improvement Program (PIP)				$62,000	$46,500		
LAV PIP				6,172,000	6,150,000		
High Mobility Artillery Rocket System				1,714,000	1,709,000		
Electronic Repair and Test Equipment				0	1,500,000		
Radar Systems					770,000		
Fire Support System				588,000	0		
Environmental Control Equipment Assorted				4,353,000	0		
Bulk Liquid Equipment				1,768,000	1,763,000		
Tactical Fuel Systems				5,258,000	5,242,000		
Amphibious Support Equipment				5,980,000	6,000,000		
Material Handling Equipment				7,306,000	7,300,000		
Container Family				565,000	0		
Family of Construction Equipment				7,040,000	4,400,000		
FY 2010 Title III NGREA Equipment							
Light Armored Vehicle 25mm A2 Variant (LAV-25A2)						$28,572,840	$23,587,126
Light Armored Vehicle Command & Control (C2) A2 Variant (LAV-C2A2)						16,044,800	16,044,800
Support Wide Area Network (SWAN) D Network Package							2,340,000
SWAN D V1							720,000
SWAN D V2							90,000
KC-130T Digital Engine Indicator Panels							1,785,714
Air Traffic Control Simulation Package						308,000	308,000
UC-12W Cargo-floor Decking & Seat Covers							50,000
Total				**$40,806,000**	**$34,880,500**	**$44,925,640**	**$44,925,640**

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Table 7

Major Item of Equipment Substitution List

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

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

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Table 8

Significant Major Item Shortages

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

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	KC-130J Aircraft	28	23	$80,121,410	$1,842,792,430	Fielding of the KC-130J begins in FY 2015 and continues through FY 2029. The extended nature of this fielding timeline results in significant operational and training compatibility issues as the AC has already fielded the KC-130J. Only 7 aircraft are programmed for the RC within the FY 2013 FYDP.
2	Blue Force Tracker Next Generation	1,317	1,317	$10,199	$13,432,083	GPS-enabled system that provides military commanders and forces with location information on friendly military forces. This item is required to meet Core Training Mission Essential Tasks (METs) and enables AC/RC integration and compatibility.
3	Lightweight Multi-band Satellite Terminal (LMST) V2	5	4	$900,000	$3,600,000	This capability is required by the RC to provide secure communication during Reserve annual training. It also enables the RC to train to the same Core Training METs as the AC.
4	Flight Training Device, MV-22B	2	1	$12,000,000	$12,000,000	This simulator is required to conduct MV-22B aircrew refresher and proficiency training and also conversion training prior to MV-22B aircraft delivery. It also enables an Aviation Virtual Training Environment (AVTE) for linkage to other training devices and crews, allowing crews to fly more sorties in a simulator/training environment.
5	Advanced Simulation Combat Operations Trainer (ASCOT)	2	2	$1,111,603	$2,223,206	The Marine Air Control Group (MACG) does not have the ability to connect tactical units together in a entity-level federated live/virtual/constructive training environment. The Tactical Air Command Center (TACC), Tactical Air Operations Center (TAOC), Direct Air Support Center (DASC), Marine Air Traffic Control (MATC), unmanned aircraft systems (UAS), and low-altitude air defense operators are unable to execute their functions, roles, and tasks in a completely integrated simulated training environment and are thus limited to Marine Air Command and Control System (MACCS) integrated operation in a live environment only. The MACG also lacks the ability to tie directly to aircraft type/model/series (T/M/S) Combat Flight Training Device (CFTD) simulators. To bridge this capability gap the MACG's have contracted a commercial off-the-shelf solution to provide high fidelity simulator functions to facilitate scenarios that require positive and procedural aircraft and missile control.

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Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
6	MAGTF Information Technology Support Center (MITSC)-Reserve Data Center	1	1	$10,430,806	$10,430,806	Marine Forces Reserve (MFR) received approval to establish a Data Center in accordance with the National Defense Authorization Act 2012 Section 2867; however, no funding exist in the FYDP for this RC requirement. The Reserve Data Center will provide the MFR a standardized communication infrastructure for the commander and staff to digitally plan, prepare, and execute operations related to the MFR mission. This Data Center will allow MFR to establish a network infrastructure commensurate with AC counterparts. Additionally it will permit MFR to establish the infrastructure necessary to support continuity of operations and disaster recovery.
7	Flight Training Device, UH-1Y	3	2	$16,500,000	$33,000,000	This simulator is required to conduct UH-1 aircrew refresher and proficiency training and also conversion training prior to UH-1Y aircraft delivery. It also enables an Aviation Virtual Training Environment (AVTE) for linkage to other training devices and crews, allowing crews to fly more sorties in a simulator/training environment.
8	Data Distribution System Module (DDS-M)	3	3	$768,896	$2,306,688	Required to meet Core Training METs and enables AC/RC integration and compatibility. The components of the DDS-M are combined to give worldwide access to SIPR/NIPR down to the user level including network access servers, E-Mail (Exchange), and encryption devices for SIPRNET supporting multiple airfields or locations during exercises and deployments. The RC currently temp loans its shortfalls from AC forces for any exercise Marine Expeditionary Brigade (MEB) level or above.
9	Grenade Launcher, Optic	1,164	1,164	$1,140	$1,326,960	Marine Corps Reserve force-wide Table of Equipment (T\E) shortage. Required to meet Core Training METs.
10	F-5N Traffic Alert and Collision Avoidance System (TCAS) / Terrain Awareness and Warning System (TAWS)	12	12	$260,000	$3,220,000	Navy F-5s (32) being funded by Navy NGREA. Without a radar altimeter, the F-5 does not possess a terrain avoidance or accurate height above terrain system. Provides required safety upgrade and common type/model/series (T/M/S) equipment necessary to enable aircraft transfers among Navy and USMC squadrons to meet adversary demand from the fleet. F-5 planned to be USMC adversary aircraft well into the 2020s. $260K each for labor and parts. $100K added to total for non-recurring engineering costs.

Chapter 4
United States Navy Reserve

I. Navy Overview

A. Navy Planning Guidance

> Our Navy today remains global, operating forward from U.S. bases and international "places" around the world. From these "places" we continue to support and operate with allies and partners who face a range of challenges, from piracy and terrorism to aggressive neighbors and natural disasters. "Places," from Guantanamo Bay to Singapore, enable us to remain present or have access to the world's strategic maritime crossroads—areas where shipping lanes, energy resources, information networks and security interests intersect. On any given day over the last year, more than 50,000 Sailors were underway or deployed on 145 of the Navy's 285 ships and submarines, 100 of them deployed overseas. They were joined by more than 125 land-based patrol aircraft and helicopters, 1,000 information dominance personnel, and over 4,000 Naval Expeditionary Combat Command Sailors on the ground and in the littorals, building the ability of partners to protect their people, resources and territory. The security and prosperity of our nation, and that of our friends and allies, depends on the freedom of the seas, particularly at the strategic maritime crossroads. (Chief of Naval Operations [CNO] before the House Armed Services Committee on, *FY 2013 Department of the Navy Posture,* dated February 2012)

The Navy continues to experience a high tempo of global operations that is expected to continue even as combat forces draw down in Afghanistan. Global trends in economics, demographics, resources, and climate change portend an increased demand for maritime power and influence. America's prosperity depends upon the seas: 90 percent of world trade moves on the world's oceans, and underwater telecommunications cables facilitate about $3.2 trillion of commerce each year. As new trade patterns emerge, such as those that will result from the expansion of the Panama Canal and the opening of the Arctic, and as disruption and disorder persist in our security environment, maritime activity will evolve and expand. Seapower allows the Nation to maintain U.S. presence and influence globally and, when necessary, project power without a costly, sizeable, or permanent footprint ashore. The Navy will continue to maintain a forward-deployed presence around the world to prevent conflicts, increase interoperability with our allies, enhance the maritime security and capacity of our traditional and emerging partners, confront irregular challenges, and respond to crises.

B. Navy Equipping Policy

DoD Instruction 1225.06, *Equipping the Reserve Forces*, policy is that:

> The Reserve Components (RCs) of each Military Department shall be equipped to provide the operational capabilities and strategic depth required of an operational force in accordance with DoD Directive 1200.17. To fulfill assigned missions, the RCs of each Military Department shall be consistently and predictably equipped. The RCs must have the right equipment, available in the right quantities, at the right time, and at the right place to support a "Train, Mobilize, and Deploy" construct for the Total Force.

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 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 regular units having the same mobilization mission.

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 Warfare, Information Dominance, 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.

C. Plan to Fill Mobilization Shortages in the RC

The Navy's Total Force is not just a concept; it is an operational and organizational reality. Operational Navy missions are executed by the Active Component (AC) and its equipment, the RC and its equipment, or a combination of both. AC and RC Sailors also provide strategic depth for maritime missions to ensure the Navy is always ready to respond globally to crisis situations while maintaining fiscal efficiency across the spectrum of operations.

Major operational and contingency plans require RC units to deploy as integrated parts of the Navy warfighting plan. Navy 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 multiple ongoing initiatives to modernize, improve, or change the operational capabilities of the RC.

- There is tremendous fleet demand to leverage Surface Reserve Component (SRC) capabilities in support of the new and rapidly expanding Littoral Combat Ship (LCS) program. The SRC has already made an impressive commitment to this strategic initiative through the establishment of 13 units and over 400 billets dedicated to LCS operations and support. The recent Vice Chief of Naval Operations directed AC-to-RC effort reviewed Reserve crewing of LCS Surface Warfare (SUW) and Mine Countermeasures (MCM) Mission Modules. These are wholly-appropriate missions for the Navy Reserve, and Reserve

LCS Mission Module units can be prepared to execute "strategic reserve" manning of Mission Modules during contingencies no later than 2015. Procurement of SUW and MCM Mission Modules is necessary to support Reserve training and operations.

- 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 DC-9 and C-9B transport aircraft with 17 C-40A aircraft. To date, 12 of the 17 have been procured, with an additional two funded and awaiting contract, through a combination of National Guard and Reserve Equipment Appropriation (NGREA), Congressional adds, and the President's Budget request for DoD procurement 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	President's Budget
2001	1	Congressional add
2003	1	Congressional add
2004	1	President's Budget
2005	1	President's Budget
2009	2	President's Budget
2010	1	President's Budget
2011	1	Congressional add
2012	1	NGREA

- The Navy is exploring cost-effective, RC-integrated manpower and equipment solutions in meeting requirements challenges faced by its newest generation of unmanned aircraft system (UAS) programs, including the MQ-4C Triton system and the MQ-8B Fire Scout vertical takeoff and landing tactical unmanned aerial vehicle (VTUAV). Specifically, the periodic and predicable nature of the Triton mission is particularly well suited for the Navy Reserve Sailor. Effectively implemented, RC manpower and associated equipment procurement can significantly reduce operating costs through innovative solutions, such as strategic placement of Triton mission control element stations in high Selected Reserve (SELRES) population density areas. Fire Scout emergent mission requirements lend themselves especially well to the strengths of the RC Sailor. When the Navy has an emergent need for the Fire Scout system capability, Navy reservists would be available for surge to meet the requirement, while providing significant savings during periods of lower utilization.

- The Tactical Support Wing (TSW) operates two squadrons of F/A-18A+ Hornets for a total of 24 aircraft that provide the bulk of the Navy's advanced adversary aircraft. These two squadrons also provide a critical strategic reserve capability and are ready to augment the AC force on deployment, as required. These two squadrons must be recapitalized with F/A-18E

or F-35C aircraft as soon as possible to provide the most capable strategic reserve and threat representative aircraft for the AC.

- The Navy Reserve operates 32 F-5 Tiger II aircraft that provide nearly 80 percent of the Navy's total adversary support missions at a fraction of the cost of using more modern platforms. Flown by some of the Navy's most experienced fighter pilots, these venerable aircraft are primarily used to train Fleet Replacement Squadron pilots in the basics of air-to-air combat. They are also used to train experienced aviators during pre-deployment exercises and to help teach Navy Fighter Weapons School (TOPGUN) students the most advanced air-to-air tactics. Upkeep and modernization of the F-5 fleet is of critical importance as these highly economical aircraft will be in use until at least 2025.

- Replacement of the EA-6B Prowler aircraft with the EA-18G Growler is required to retain RC fleet electronic attack (EA) capability. RC EA-6Bs were previously programmed to retire by 2012, coincident with expiration of the expeditionary airborne electronic attack (AEA) requirements. However, recent direction mandated an extension of the expeditionary AEA mission and directed transition of four EA-6B squadrons to the EA-18G platform. This included the RC Prowler squadron and serves as the baseline for the Reserve EA-18G recapitalization plan.

- The Maritime Patrol and Reconnaissance P-3C aircraft continue to be affected by advancing structural fatigue across the inventory. Due to a fleet-wide shortage in P-3C aircraft, AC utilization of RC aircraft has become a necessity. Utilization of RC aircraft has been fully incorporated into AC training and readiness, forward-deployment, and P-3C sustainment/sundown plans. There are no plans to extend the P-3C service life (RC aircraft included) or maintain P-3C maintenance support capabilities beyond the P-8A full operational capability (FOC) in FY 2019. If the RC is to retain its ability to recapture Maritime Patrol and Reconnaissance experience/investment and provide surge capacity in support of major combat operations, both RC patrol squadrons (VP) must be recapitalized with the P-8A aircraft.

- Procurement of additional C-130 aircraft to meet the Navy standard requirement and replacement of aging and maintenance-intensive C-130T aircraft with the KC-130J are critical RC capability improvements. C-130 aircraft are a crucial part of Navy-unique fleet-essential airlift (NUFEA) requirements; they serve as a connector between strategic airlift points and the carrier onboard delivery and vertical onboard delivery to the fleet, and specialize in outsized cargo.

- Baseline, Overseas Contingency Operations (OCO), and NGREA funding continue to fill critical equipment gaps in the modernization and recapitalization of Naval Construction Force, Navy Expeditionary Logistics Support Group (NAVELSG), and Coastal Riverine Force (CRF). RC Navy Expeditionary Combat Command (NECC) units still require $257M of funding across the Future Years Defense Program (FYDP) for full modernization and outfitting.

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 and upgrade programs 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 upon Service budget priorities, Congressional adds, and NGREA for recapitalizing aging and depreciated assets.

II. Navy Reserve Overview

A. Current Status of the Navy Reserve

1. General Overview

Top Navy Reserve Equipping Challenges

- Aircraft procurement (C-40A, E/A-18G, P-8A, KC-130J, F/A-18E)
- Expeditionary equipment procurement (Coastal Riverine Force [CRF], Naval Construction Force [NCF], and Navy Expeditionary Logistics Support Group [NAVELSG])
- Naval Special Warfare equipment

In January 2010, the CNO, the Chief of Naval Personnel, and the Chief of Navy Reserve signed the *Navy Total Force Vision for the 21st Century (NTF 21)*. This document clearly articulates Navy's vision for a Total Force and emphasizes that Active Sailors, Reserve Sailors, and Navy civilians are the Navy's most important resource and the critical component to meeting the demands of the Maritime Strategy, *A Cooperative Strategy for 21st Century Seapower (CS-21)*. NTF 21 guides the Navy's personnel policies and strategies and serves to codify the blended forces as an organizational fact of life and a force of choice.

Operationally, the Navy Reserve is fully engaged across the full spectrum of Navy, Marine Corps, and joint force operations, from peace to war. At the tip of the spear, more than 3,600 mobilized or deployed Navy Reserve Sailors are providing about half of the Navy's ground forces serving in the Central Command (CENTCOM) and in other critical roles worldwide. Expeditionary Sailors deploy both as individual augmentees in a variety of Joint Force assignments and as rotational forces, such as the Seabee battalions and Coastal Riverine Force Embarked Security Teams.

Mobilizations are but one form of duty performed by Navy Reserve Sailors. While executing these mobilizations in 2012, the Navy Reserve continues to bring valued capabilities for urgent requirements and ongoing operational support. For example, in the immediate aftermath of the devastating tsunami in Japan, the Navy Reserve was an important part of Operation Tomodachi. Within hours, Navy Reserve Fleet Logistics Support Squadron (VR) aircraft provided on-demand airlift delivering urgently needed radiological control equipment and teams to mainland Japan. In all, Navy Reserve VR aircraft flew 2,300 hours, transporting 2.1 million pounds of cargo and 5,800 passengers in support of Operation Tomodachi. It is this type of "on-demand response" that contributes to keeping the Navy Reserve a highly-valued part of the Navy Total Force.

Every day, Navy Reserve Sailors provide important operational support to the Navy with approximately one-quarter of its Sailors on full-time active duty (Full-time Support [FTS], mobilizations, deployments, active duty operational support [ADOS], etc.), while many others provide their expertise on a "part-time" basis (inactive duty training [IDT], annual training [AT], active duty for training [ADT], etc.). Some examples include SELRES Sailors providing critical maintenance support to ships in the United States and forward deployed; the skilled engineers and technicians in the Naval Sea Systems Command, executing shipyard projects; the FTS and SELRES aviators serving as instructors for 20 percent of the training sorties flown in the aviation pipeline; and the intelligence community providing key global intelligence support. Ideally suited to take on periodic and predictable work, this ready and accessible force of skilled Sailors provides valued capabilities on an ongoing basis. And, in the case of SELRES Sailors, when their work is done, they go back to their civilian employers and off the Navy payroll. Navy Reserve Sailors are both a highly-skilled and cost-effective workforce.

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. The appropriation has bolstered the recapitalization of critical RC equipment in both Naval Aviation and the Surface Navy and has been instrumental in resourcing the capability of NECC.

a. Fleet Air Logistics

The RC provides 100 percent of the Navy's organic, global airlift capability for Fleet and Combatant Commands (COCOMs), while providing airlift support to all military departments within the continental United States. The Fleet Logistics Support Wing consists of 12 squadrons operating C-40A, C-9B, C-20A/D/G, C-37A/B, and C-130T aircraft. C-9B aircraft average more than 34 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-9B study calculated an operational equivalency of 1.8 C-9Bs to 1.0 C-40A, which equates to the C-40A possessing nearly twice the lift capacity, range, and Ready-for-Tasking (RFT) rate of a C-9B. Significant airlift recapitalization was initiated in FY 1997 when $120M of NGREA funding was provided to procure the first two C-40A aircraft, beginning the replacement of the C-9B fleet. Ten more C-40As were procured between FY 1998 and FY 2011 utilizing funding through NGREA, Congressional adds, and the President's Budget. To date, 12 C-40As have been accepted and are being operated by VR-56 (Naval Air Station [NAS] Oceana, VA), VR-57 (NAS North Island, CA), VR-58 (NAS Jacksonville, FL), and VR-59 (NAS Joint Reserve Base [JRB], Fort Worth, TX).

The C-130Ts are operating at a five-plane shortfall and the current fleet is Communications, Navigation, Surveillance (CNS)/Air Traffic Management (ATM) compliant through 2014, although limited due to the lack of a certified Global Positioning System (GPS) and enhanced altitude reporting capability. The Navy has funded a prioritized list of requirements that will upgrade these aircraft to meet CNS/ATM mandates. These updates will ensure the C-130 fleet's ability to operate, and meet Navy-unique logistics requirements worldwide beyond 2014. Conversely, the KC-130J has twice the RFT days as the C-130T and is the best long term sustainment option. Because of its versatile capability, the C-130T remains the most requested airlift asset in the Navy Reserve fleet. Its ability to deliver outsized or special-handling cargo to nearly any location worldwide remains a critical capability for Fleet and COCOMs.

b. Tactical Aviation

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

The E/A-6B squadron, VAQ-209, completed its last CENTCOM deployment to Bagram, Afghanistan in November 2011, flying 769 combat hours. The E/A-6B is currently planned to be removed from the Navy's inventory in FY 2015. VAQ-209 is scheduled to fly the E/A-6B until

FY 2013 supporting AEA testing and supplement Fleet Replacement Squadron requirements. The Navy is planning to recapitalize the RC E/A-6B Prowlers with five E/A-18G aircraft by the end of FY 2013 with the squadron Safe for Flight in 2014 and their first deployment in 2015. The transition is needed to mitigate the AEA capacity and capability gap in the future. 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 Joint Strike Fighter (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. 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.

c. Maritime Patrol and Reconnaissance Aircraft (MPRA)

The RC currently provides eight percent of the Navy's useable maritime patrol aircraft providing antisubmarine warfare (ASW) surge capacity, combating transnational organized crime operations, humanitarian assistance/disaster relief support, increased homeland defense contingency options, and Fleet and North Atlantic Treaty Organization exercise support. The RC has two P-3C squadrons, composed of six antisurface warfare improvement program (AIP) and six block modification upgrade program (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 two 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 six combat-ready aircrews for worldwide surge.

Increased COCOM demand, grounding notifications issued through airframe bulletins, and increased readiness requirements have resulted in a fleet-wide shortage of P-3C aircraft and the corresponding incorporation of RC aircraft into AC training and readiness, forward-deployment, and P-3C sustainment/sundown plans. Twelve AC squadrons began transition to the P-8A in FY 2012 with FOC to be achieved in FY 2019. In response to a Global Force Management reduction associated with the AC P-8A transition, the RC is scheduled to provide three combat aircrews for each of four six-month deployments, thereby ensuring the Maritime Patrol and Reconnaissance Force maintains its ability to satisfy COCOM requirements. In addition to these deployments, the RC is slated to assume the Littoral Surveillance Radar System (LSRS) mission, thereby allowing the AC to complete its transition while awaiting FOC of the P-8A's LSRS-replacement system. The Navy is currently pursuing plans to replace the 12 RC P-3Cs with seven P-8As. The recapitalization of both RC VP squadrons is necessary if the RC is to retain its ability

to recapture maritime patrol and reconnaissance experience/investment and provide surge capacity in support of major combat operations.

d. Rotary Wing Aviation

The RC currently provides three helicopter squadrons to the Navy's rotary-wing fleet. All three squadrons are fully integrated into AC wings. The RC also provides personnel and equipment (seven MH-53E helicopters) in support of two composite AC/RC airborne mine countermeasures (AMCM) squadrons, HM-14 and HM-15. RC rotary-wing assets currently provide the Navy's only dedicated Naval Special Warfare support squadrons, 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 counternarcotics operations.

The RC helicopter inventory consists of the HH-60H, SH-60B, and MH-53E aircraft. Personnel from HSC-84 (NAS Norfolk, VA) have been partially mobilized and deployed in support of OCO, supporting special operations ground force missions in urban and rural areas, psychological operations, and medical and casualty evacuations in the CENTCOM area of responsibility (AOR). HSC-85 (NAS North Island, CA) recently transitioned to the HH-60H aircraft and is currently undergoing training to perform the same mission and provide the same capability as HSC-84 and has been certified for deployment at the beginning of FY 2013. HSL-60 (Naval Station Mayport, FL) is tasked with counternarcotics operations, deploying for six-months per year with joint interagency task force organizations in the Southern Command (SOUTHCOM) AOR. Additionally, this squadron provided the first Reserve detachment to deploy with MQ-8B Fire Scout VTUAVs onboard the USS SIMPSON (FFG-56) in support of special operations.

e. Coastal Riverine Force (CRF)

In 2012, NECC merged the Riverine Force and the Maritime Expeditionary Security Force to form the CRF. The CRF performs maritime expeditionary security missions on land, in harbors, rivers, and bays, bridging the maritime gap between land forces and the Navy's traditional blue water forces. The combined force is organized into three Active squadrons with four companies each and four Reserve squadrons with three companies each. The CRF is comprised of 4,400 personnel (1,900 Reserve).

The CRF is responsible for protecting and defending the littoral operating area for Navy. CRF units are adaptive to mission requirements, scalable, and agile. Units conduct force protection of critical maritime infrastructure, strategic sealift vessels and naval vessels operating in the inshore and coastal areas, anchorages and harbors. CRF units deploy worldwide to detect, deter, and defend an area, unit, or high-value asset.

Fully outfitting the combined force will require MK VI Patrol Boats and Riverine Command Boats for each of the Reserve squadrons. Additional funding is also required for the Mobile

Ashore Support Terminal (MAST) and Radar Sonar Surveillance Center (RSSC). CRF has a projected total shortfall of $184.5M across the FYDP.

f. Explosive Ordnance Disposal (EOD)

The two Reserve EOD commands stationed in Norfolk and San Diego are each programmed to be decommissioned due to the highly perishable nature of their training and will not require Reserve funding for FY 2014.

g. Naval Construction Force (NCF)

The Navy Reserve component of NCF consists of four Naval Construction Regiments (NCRs) and 12 Naval Mobile Construction Battalions (NMCBs). The Navy has been forced to make difficult force structure decisions due to the constrained resource environment. As a result, in FY 2014, one NCR and four NMCBs are programmed to be decommissioned. The reductions allow NCF to continue providing all core capabilities required for unified commander demands, while enabling expansion in the future, if required. All units will continue to have the same operational chain of command, mission, readiness standards, and equipment, providing a still fully integrated force.

Due to force structure reductions, one Reserve NMCB P25 Table of Allowance (TOA) and three Reserve NCR P29 TOAs will be redistributed to fill shortages across the NCF, making the remaining force better equipped than at present. Funding is still required to upgrade Tactical Data Networks for six NMCBs and six support sites totaling $13.2M.

h. Navy Expeditionary Logistics Support Group (NAVELSG)

NAVELSG is responsible for providing expeditionary logistics capabilities for the Navy, primarily within the maritime domain of the littorals, and conducts surface and air cargo handling missions, cargo terminal and warehouse operations, fuels distribution, postal services, ordnance reporting and handling, and expeditionary communications.

NAVELSG is a deployable Reserve command organized and staffed to provide a wide range of supply and transportation support critical for peacetime support, crisis response, humanitarian, and combat service support missions. NECC determined that, in light of reduced combat operations, four of 10 RC Navy Cargo Handling Battalions (NCHBs) will be disestablished from NAVELSG in FY 2014, but the force will remain nearly 90 percent Reserve, making its equipping critical for contingency operations in support of theater commanders. The reduction has no impact on its TOA equipment sets as NECC intends to only outfit a maximum of three RC NCHBs.

NAVELSG's consolidated TOA requires additional civil engineering support equipment, construction equipment, and rapid response kits, with a projected total shortfall of $59.7M across the FYDP.

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

The MCAST Command provides 17 Active and 30 Reserve maritime civil affairs (MCA) teams and 25 Active and five Reserve mobile training teams (MTTs)/security force assistance, utilizing a small footprint across a wide range of civil and military organizations. The MCA teams assist in training with port operations, maritime infrastructure maintenance, fisheries resources and management, and law of the sea. The MTTs likewise provide a broad range of training, including marine engine maintenance, expeditionary security, and professional development. The small teams are better suited to the capabilities of emerging world partners than larger naval forces, significantly enhancing partnership building.

In FY 2014, Active MCAs will all transition to Reserve leaving zero AC and 32 RC five-person teams. The 15 Security Force Assistance (SFA) teams will all be Active four-person teams. Previous shortfalls of infantry gear, containers, computers, communications equipment, and embarkation equipment identified in the last report were funded.

j. Expeditionary Combat Camera Norfolk (EXPCOMBATCAM)

EXPCOMBATCAM provides video and still documentation teams that deploy in support of the Navy, joint task forces, COCOMs, Chairman of the Joint Chiefs of Staff, and OSD. EXPCOMBATCAM forces provide specialized imaging acquisition and transmission capabilities to document combat operations, contingency operations, fleet and force exercises, and historical events. The RC composes 40 percent of the EXPCOMBATCAM force and maintains the requisite skill set and qualifications to provide documentation in the full range of military operations, including aerial and underwater imagery.

k. Navy Expeditionary Intelligence Command (NEIC)

The NEIC provides tactical force protection, indications and warning, and intelligence collection, enabling Navy commanders to conduct missions across the full spectrum of expeditionary operations. Its teams perform human intelligence on land and in the maritime environment with the capability to support visit, board, search, and seizure in support of traditional Navy assets worldwide.

Additional capabilities include expeditionary intelligence analysis, tactical electronic warfare, and information operations. These missions assist commanders in intelligence preparation, computer network operations support, and theater cultural awareness.

l. Surface Warfare

The Surface Warfare Enterprise is supported by more than 2,000 Surface Navy reservist billets across 86 RC units and detachments. These RC units support seven major mission areas within Surface and Amphibious Warfare including: LCS units, surface readiness detachments, naval beach group, assault craft units, beachmaster units, amphibious construction battalions, Tactical Group/Squadron Amphibious Readiness Group Air Control, and Afloat Culture Workshops. Additionally, RC Sailors provided critical operational support to Surface Navy deployments to CENTCOM, Africa Command, SOUTHCOM, and U.S. 7th Fleet.

The newest and highest priority of the Surface Reserve Component is the LCS strategic initiative, currently consisting of 13 units and over 400 billets dedicated to LCS seaframe and Mission Module support and operations. Six Reserve Mission Module units are currently planning to execute "strategic reserve" manning of SUW and MCM Mission Modules during contingencies. These are hardware units that will be fully trained and ready to deploy for green and blue water fleet operations by 2014. Accordingly, procurement of SUW and MCM Mission Modules is required to support Reserve unit training and operations.

Surface warfare equipment shortfalls for LCS Mission Modules total $366M across the FYDP. In support of the beach group mission, the Navy Reserve owns and operates ten Maritime Prepositioning Force Utility Boats (MPFUB) at five Navy Operational Support Centers. Assault Craft Unit ONE and TWO Reserve detachments use the MPFUBs to train to conduct Assault Follow-on Echelon offload missions, provide necessary relief for AC crews as required, and cover homeport requirements for deployed units.

m. Naval Special Warfare (NSW)

Naval Special Warfare Group 11 is the immediate superior for two AC sea-air-land (SEAL) teams, with 15 RC operational support units and 15 regional NSW detachments, comprising 1,009 AC and RC billets. At any given time, one-third of NSW RC personnel are providing seamlessly integrated operational support to the NSW total force.

The globalization of the special operations enterprise has seen increased demands on NSW RC personnel and equipment as these forces are employed worldwide. Additionally, mission capability traditionally incumbent within the AC (e.g., unmanned aerial vehicle, counternarcotics, interagency operations) are increasingly being sourced to NSW RC in addition to its core mission, freeing AC units to pursue core missions while taking advantage of the extraordinary civilian and military skill set incumbent within NSW RC. Since the force became operational in 2008, NSW RC has relied heavily on NSW AC units

to provide equipment for both training and deployment. There continues to be an increasing demand placed upon NSW RC's mission of manning, training, and equipping special operations forces in support of global requirements. NGREA funding has been very effective in mitigating critical shortages in NSW RC's Basis of Issue (BOI) as a result of significant reductions in NSW BOI.

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 (34 years old), P-3Cs (28 years old), and EA-6Bs (26 years old). These aircraft all operate at a significantly higher cost, produce lower RFT rates, and provide lesser capability than their projected replacement platforms.

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 adds, have improved RC equipment capability and compatibility.

For the NCF, CRF, and NAVELSG units, fully funding required equipment remains a challenging issue. Beginning in FY 2003, significant funding increases from Congressional adds and NGREA have aided these units in reducing these shortfalls.

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 materiel 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. Periodically, 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 the Last NGRER

A recent Navy efficiency initiative removed all funding for three Navy Reserve Fleet Logistics Support Squadrons beginning in FY 2014. As a result, C-9B squadrons at NAS Fort Worth, TX and Joint Base McGuire, NJ and a C-20G squadron at Joint Base Andrews, DC divested their respective aircraft and ceased logistics operations on September 30, 2012. The disestablishment of these three squadrons resulted in a decrease of approximately 8,500 hours of Fleet and joint airlift support. With no official procurement plan across the FYDP, the Navy's organic airlift fleet operates at a three aircraft deficit for the C-40A and a five aircraft deficit for the C-130, and relies on NGREA and Congressional add funding to reach wartime requirement minimums.

C. Future Years Program (FY 2014–FY 2016)

1. FY 2016 Equipment Requirements

Table 1 provides projected FY 2014–FY 2016 major equipment inventories and requirements.

2. Anticipated New Equipment Procurements

In FY 2011, significant funding was provided to MCAST, NEIC, EXPCOMBATCAM, CRF, and NAVELSG to procure TOA equipment. This funding will reduce the RC TOA shortfalls for these units and increase 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 2016

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 are LCS Mission Module procurement, including those for both SUW and MCM, and 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 13 years of combat deployments in support of COCOM requirements.

Because the Expeditionary Forces are 50 percent Reserve, proper equipping of those forces is critical to continued seamless operations. Available funds will fill critical shortfalls in equipment for NCF, NAVELSG, and CRF. Additionally, as the Navy continues to develop UAS programs like Triton and Fire Scout, the opportunity for Navy Reserve engagement will grow. The capacity to participate in these mission sets will enhance the Total Force as we continue to progress into the 21st century.

The Navy Reserve will play a vital role in Navy's Total Force that will deliver these capabilities. As stated in the 2010 Quadrennial Defense Review Report,

> prevailing in today's wars requires a Reserve Component that can serve in an operational capacity—available, trained, and equipped for predictable routine deployment. Preventing and deterring conflict will likely necessitate the continued use of some elements of the Reserve Component—especially those that possess high-demand skill sets—in an operational capacity well into the future.

Today's Navy Reserve provides both strategic depth and operational capabilities. Depending on the mission, we mirror or complement the AC. We mirror the AC and provide rotational forces for those missions where it makes operational and fiscal sense. We complement the AC by providing unique capabilities in other areas, such as in the intratheater logistics support, counternarcotics surveillance, and Naval Special Warfare helicopter support missions. The correct AC/RC mix varies with each of the Navy's wide variety of missions and required capabilities.

USNR

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. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Aircraft							
Aircraft, Transport, C-9B (Skytrain)	C-9B	$10,924,425	4	4	0	0	0
Aircraft, Transport, C-40A (Boeing 737-700)	C-40A	$81,400,000	12	12	14	14	17
Aircraft, Transport, C-130T (Hercules)	C-130T	$28,343,475	19	19	19	19	20
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	4	4	4	4
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, Patrol, P-3C (Orion)	P-3C	$74,471,355	12	12	12	12	12
Aircraft, Electronic Attack, EA-6B (Prowler)	EA-6B	$87,419,205	4	0	0	0	0
Aircraft, Electronic Attack, EA-18G (Growler)	EA-18G	$85,000,000	5	5	5	5	5
Aircraft, Fighter/Attack, F/A-18A+ (Hornet)	F/A-18A+	$54,074,610	20	20	20	20	24
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	33
Helicopter, Combat SAR, HH-60H (Seahawk)	HH-60H	$15,564,330	24	24	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	8	8	7	3	3
Naval Beach Group							
Maritime Prepositioning Force Utility Boat	MPF-UB	$1,000,000	10	10	10	10	10
Naval Beach Group TOA	NBG	$26,705,722	1	1	1	1	1
Naval Construction Force (NCF)							
Construction Battalion Maintenance Unit TOA	P05	$15,741,049	2	2	2	2	2
Naval Mobile Construction Battalion TOA	P25	$69,919,268	5	5	5	5	5
Naval Mobile Construction Battalion PGI TOA	P25PGIRC	$5,635,644	8	6	6	6	6
Naval Construction Regiment TOA	P29	$12,159,643	1	1	1	1	1
Naval Construction Regiment PGI TOA	P29PGIRC	$811,788	3	3	3	3	3
Naval Construction Division TOA	P30	$855,657	1	1	1	1	1
Construction Capability Augment TOA	P32	$133,479,019	1	1	1	1	1
NCF Training Allowance TOA	P47	$46,703,859	1	1	1	1	1

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
EXPCOMBATCAM TOA Equipment	EO9	$2,800,000	1	1	1	1	1
Coastal Riverine Force (CRF)							
Squadron Headquarters TOA Equipment	B01SQDHQ	$53,025,629	4	4	4	4	4
Mobile Ashore Support Terminal	B01S02MAST	$3,106,533	4	4	4	4	4
Radar Sonar Surveillance Central	B01S02RSS1	$2,848,481	8	8	8	8	8
Naval Explosive Ordnance Disposal (EOD) Forces							
Naval EOD Operational Support Unit TOA	J04EODSU	$57,195,489	2	0	0	0	0
Navy Expeditionary Logistics Support Group (NAVELSG)							
Navy Expeditionary Logistics Regiment Staff TOA	F01NLRSTF	$1,241,266	3	3	2	2	3
Expeditionary Communications Detachment TOA	F01ECD	$1,072,163	3	3	2	2	3
Navy Cargo Handling Battalion TOA	F01NCHB	$32,720,818	3	3	3	5	5
Maritime Civil Affairs & Security Training (MCAST)							
Maritime Civil Affairs Team TOA	E01MCATR	$270,181	15	32	32	32	32
Navy Expeditionary Intelligence Command (NEIC)							
Intelligence Exploitation Team TOA Equipment	G11IET	$1,044,181	8	6	6	6	6
Aviation Simulators							
C-130T Simulator	C-130T SIM	$17,735,417	3	3	3	3	3
Surface Forces							
Mission Module, SUW, Littoral Combat Ship	SUW MM	$26,000,000	0	2	3	3	3
Mission Module, MCM, Littoral Combat Ship	MCM MM	$96,000,000	0	0	1	3	3

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aircraft, Transport, C-9B (Skytrain)	C-9B	34	
Aircraft, Transport, C-40A (Boeing 737-700)	C-40A	7	New aircraft delivered.
Aircraft, Transport, C-130T (Hercules)	C-130T	18	
Aircraft, Transport, C-20A (Gulfstream)	C-20A	29	
Aircraft, Transport, C-20D (Gulfstream)	C-20D	25	
Aircraft, Transport, C-20G (Gulfstream)	C-20G	20	
Aircraft, Transport, C-37A (Gulfstream)	C-37A	10	
Aircraft, Transport, C-37B (Gulfstream)	C-37B	6	
Aircraft, Patrol, P-3C (Orion)	P-3C	28	
Aircraft, Electronic Attack, EA-6B (Prowler)	EA-6B	26	
Aircraft, Fighter/Attack, F/A-18A+ (Hornet)	F/A-18A+	26	
Aircraft, Fighter, F-5 (Freedom Fighter)	F-5E/F/N	33	
Helicopter, Combat SAR, HH-60H (Seahawk)	HH-60H	20	
Helicopter, Minewar, MH-53E (Sea Dragon)	MH-53E	19	
Helicopter, ASW, Frigate, SH-60B (Seahawk)	SH-60B	27	
Ships			
Frigate, Guided Missile (Perry Class) Flight III	FFG	29	
Naval Beach Group			
Maritime Prepositioning Force Utility Boat	MPF-UB	3	
Naval Construction Force			
Construction Battalion Maintenance Unit TOA	P05	14	Average age of major equipment in TOA
Naval Mobile Construction Battalion (NMCB) TOA	P25	8	Average age of major equipment in TOA
Naval Construction Regiment (NCR) TOA	P29	6	Average age of major equipment in TOA
Construction Capability Augment TOA	P32	12	Average age of major equipment in TOA
NCF Training Allowance TOA	P47	6	Average age of major equipment in TOA
EXPCOMBATCAM TOA Equipment	E09	2	Average age of major equipment in TOA
Coastal Riverine Force (CRF)			
Squadron Headquarters TOA Equipment	B01SQDHQ	6	Average age of major equipment in TOA
Mobile Ashore Support Terminal	B01S02MAST	7	
Radar Sonar Surveillance Central	B01S02RSS1	7	
Naval Explosive Ordnance Disposal Forces			
Naval EOD Operational Support Unit TOA	J04EODSU	6	Average age of major equipment in TOA
Navy Expeditionary Logistics Support Group			
Navy Expeditionary Logistics Regiment Staff TOA	F01NLRSTF	8	Average age of major equipment in TOA
Expeditionary Communications Detachment TOA	F01ECD	5	Average age of major equipment in TOA
Navy Cargo Handling Battalion TOA	F01NCHB	8	Average age of major equipment in TOA
Maritime Civil Affairs & Security Training			
Maritime Civil Affairs Team TOA	EO1MCAT	3	Average age of major equipment in TOA

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Maritime Civil Affairs OPS Planning Staff TOA	EO1MCATR	3	Average age of major equipment in TOA
Navy Expeditionary Intelligence Command (NEIC)			
Intelligence Exploitation Team TOA Equipment	G11IET	2	Average age of major equipment in TOA
Aviation Simulators			
C-130T Simulator	C-130T SIM	25	Average age of all three simulators

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016
Other Aircraft			
KC-130J	$166,646,000	$102,814,000	$133,512,000
Modification of Aircraft			
Adversary Aircraft	2,992,000	1,497,000	
H-53 Series	40,852,000	21,004,000	18,622,000
C-130 Series	18,911,000	22,133,000	22,466,000
Cargo/Transport Aircraft (A/C) Series	14,587,000	16,073,000	16,231,000
Other Procurement			
Standard Boats	1,103,000	1,132,000	1,144,000
Passenger Carrying Vehicles	340,000	344,000	350,000
Construction & Maintenance Equipment	354,000	362,000	367,000
Tactical Vehicles	398,000	12,986,000	10,286,000
Items Under $5M - Civil Engineering Support Equipment	1,577,000	1,815,000	2,059,000
Materials Handling Equipment	902,000	1,440,000	1,395,000
C4ISR Equipment	1,856,000	1,853,000	1,886,000
Physical Security Equipment	2,441,000	2,499,000	2,524,000
Total	**$252,959,000**	**$185,952,000**	**$210,842,000**

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013
FY 2011 Title IX NGREA Equipment			
C-130T Electronic Propeller Control System (EPCS)	$15,600,000		
Navy Expeditionary Logistics Support Group (NAVELSG) Cargo Handling Battalion Tactical Vehicles, Construction Equipment, and Table of Allowance (TOA) Equipment	9,517,500		
F/A-18 Helmet-mounted Sight Integration	9,392,000		
Adversary Digital Radio Frequency Memory (DRFM) Electronic Attack (EA) Pods	7,596,000		
Special Forces Personal Protection Equipment	5,864,755		
C4ISR Equipment	4,762,245		
F-5 Terrain Avoidance Warning System (TAWS)/Traffic Collision Avoidance System (TCAS)	4,245,000		
Maritime Civil Affairs and Security Training Command Mobile Training Team TOA Equipment	3,180,000		
Navy Expeditionary Intelligence Command TOA Equipment	2,788,000		
Maritime Expeditionary Security Force (MESF) TOA Equipment	1,990,500		
Optics/Night Vision Equipment	1,800,000		
NAVELSG Expeditionary Communications Detachment TOA Equipment	1,120,000		
Deployment Operating Stock	740,000		
Combat Camera TOA Equipment	680,000		
F-5 Structural Sustainment	483,000		
Maritime Civil Affairs and Security Training Command Civil Affairs Team TOA Equipment	241,000		
FY 2012 Title IX NGREA Equipment			
C-40A Aircraft		$73,900,000	
Naval Special Warfare (NSW) Weapons		800,000	
NSW Mission Tasking Communication Equipment		300,000	
Total	**$70,000,000**	**$75,000,000**	

1. Service FY 2013 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2013 will be provided in next year's NGRER.

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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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Aircraft, Transport, C-9B	C-9B		-4		Replacing C-9Bs with C-40As
Aircraft, Electronic Attack, EA-6B	EA-6B	-4			Replacing 4 EA-6Bs with 5 EA-18Gs
Frigate, Guided Missile (Perry Class) Flight III	FFG		-1	-4	Fleet continues decommissioning FFGs.
Naval Mobile Construction Battalion PGI TOA	P25PGIRC	-2			
Naval EOD Operational Support Unit TOA	J04EODSU	-2			Both EOD Operational Support Units are to be decommissioned. Equipment inventory will be transferred to the EOD AC to support mission requirements.
Navy Expeditionary Logistics Regiment Staff TOA	F01NLRSTF		-1		
Expeditionary Communications Detachment TOA	F01ECD		-1		
Maritime Civil Affairs OPS Planning Staff TOA	E01MCATR	+17			17 AC MCATs are to be converted to RC in FY 2014 for total of 32.
Intelligence Exploitation Team TOA Equipment	G11IET	-2			Two Reserve Teams to be eliminated in FY 2014.

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2010 Planned Transfers & Withdrawals							
Landing Craft Utility, LCU 1600	LCU 1600	-1	+1				
Landing Craft Mechanized	LCM-8	-6	+6				
FY 2010 P-1R Equipment							
Airlift Aircraft							
C-40A				$74,381,000	$73,336,000		
Modification of Aircraft							
H-53 Series				7,335,000	7,312,000		
Cargo/Transport A/C Series				19,429,000	15,519,000		
C-130 Series					1,802,000		
Small Boats							
Standard Boats				1,062,000	1,059,000		
Civil Engineering Support Equipment							
Passenger Carrying Vehicles				567,000	450,000		
Construction & Maintenance Equipment				220,000	5,780,000		
Tactical Vehicles				11,280,000	12,760,000		
Items under $5 Million				1,441,000	5,420,000		
Supply Support Equipment							
Materials Handling Equipment				1,148,000	1,144,000		
Command Support Equipment							
C4ISR Equipment				2,509,000	2,501,000		
Physical Security Equipment				4,108,000	4,095,000		
FY 2010 Title III NGREA Equipment							
NCF CESE (Tactical Equipment, Loader, Concrete Mixer)						$14,900,000	$14,871,657
F-5 Structural Sustainment						11,792,000	13,047,000
EOD CESE (Cargo Truck, Forklifts, HMMWVs)						11,146,000	11,174,343
C-130T Electronic Propeller Control System (EPCS)						8,400,000	0
C-130T Simulator Repair and Upgrades							8,400,000
SH-60B Forward Looking Infrared (FLIR) Turret and Electronic Unit						3,265,000	3,265,000
Maritime Prepositioning Force Utility Boats (MPFUB)						3,000,000	3,001,000
SH-60B Night Vision Goggle Head's Up Display Modification						1,242,000	1,241,000
Remote Access Devices						1,000,000	0
C-9B Enhanced Ground Proximity Warning System (EGWPS)						255,000	0
Total				**$123,480,000**	**$131,178,000**	**$55,000,000**	**$55,000,000**

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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 2014 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

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Table 8

Significant Major Item Shortages

NOTE: This table provides 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	3	$81,400,000	$244,200,000	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	KC-130J	5	5	$88,000,000	$440,000,000	Procures KC-130J aircraft for the Navy RC. These aircraft will fill the shortfall 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. AMP cancellation leaves the C/KC-130T without a solution for issues of equipment obsolescence, supportability, commercial standardization, global navigation and safety.
3	Coastal Riverine Force (CRF) Boats, and Communications Upgrades	various	various	various	$184,514,332	Funds shortfalls of Riverine Command Boats and MK VI Patrol boats required to support Reserve CRF training for Maritime Infrastructure Protection and High Value Asset (HVA) escort in the greenwater. Funding also required to converge Coastal Riverine Squadron Mobile Ashore Support Terminal (MAST) & Radar Sonar Surveillance Center (RSSC) core IP services.
4	C-130T Simulator	1	1	$17,735,417	$17,735,417	Funds one C-130T simulator modification. The 2F152, C-130T Operational Flight trainer is a critical link in the Commander Fleet Logistics Support Wing (CFLSW), aircrew training continuum and is in dire need of an upgrade. Transferred to Navy Reserve in 2005 with the most recent update performed in 1998. Computing systems are obsolete and not supportable. CFLSW's long range training plan requires upgrading the 2F152 to the Avionics Obsolescence Upgrade (AOU) aircraft configuration. Simulator re-host and configuration upgrade: $17,735,417 Cost includes $2.0M for Naval Air Warfare Center Training Systems Division (NAWC-TSD) support and is based on current 2F107 upgrade support cost.

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Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
5	NSW Small Combatant Craft (11 Meter Rigid Hull Inflatable Boat [RHIB])	6	6	$1,703,017	$10,218,102	Special Weapons Combatant Crewman require standard 11 Meter RHIBs to effectively train and deploy in support of SOCOM missions worldwide. Currently, NSW reserves rely upon Naval Special Warfare Group Four to provide craft for training and deployment. To meet current mission requirements NSW SWCC can no longer be constrained by the availability of Active Component inventories. Six boats provide a minimum operational capability for NSW Reservists
6	NSW Small Unmanned Aerial Vehicle - UAV (PUMA) systems	15	15	$676,000	$10,140,000	NSW's shifting mission in response to SOCOM's globalization of the force initiative has shifted the requirement for small unmanned aerial surveillance systems (PUMA) in large part from the Active Component to NSW reserve. This realignment is unfunded and requires procurement of deployable systems by NSW Reserve forces.
7	Naval Construction Force (NCF) Table of Allowance (TOA) Equipment	various	various	various	$13,200,000	Funding required to upgrade NCF NECC Enterprise Tactical Command and Control (NETC2) Systems in support of the NMCB reserve deployable units and 6 NMCB reserve support sites (drill sites with communications equipment)
8	Navy Expeditionary Logistics Support Group (NAVELSG) TOA Equipment	various	various	various	$32,544,942	Funds remaining shortfalls within the three (R) FO1 Navy Cargo Handling Battalion (NCHB) sub-components, Civil Engineering Support Equipment (CESE), Construction Equipment and Rapid Response Kits over a 3 year period starting in FY 2013.
9	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+.
10	P-8A	12	12	$224,600,000	$2,695,200,000	Procures seven P-8As to fill patrol, reconnaissance, and intelligence gathering capability gap. Remaining 12 RC P-3Cs (35 RC aircraft transferred to AC in order to mitigate 31 AC aircraft struck in 2008) slated for incorporation into "Best of Breed" program and continued AC utilization through completion of P-8A transition. Subsequent disestablishment of P-3C support infrastructure prohibits continued P-3C operations and necessitates an earlier-than-anticipated RC transition.

Chapter 5
United States Air Reserve Components

I. United States Air Force Overview

A. Air Force Planning Guidance

In the United States Air Force Posture Statement 2012, the Air Force emphasizes the new strategic direction laid out by the Department of Defense that results in making hard choices in this new fiscal environment by trading size for quality. Pursuit of this new defense strategic guidance in an era of constrained resources is reflected in acquisition and modernization priorities distributed among 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 of our agile and flexible capabilities:

- Air Force Mission: "fly, fight and win…in air, space and cyberspace."
- 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

B. Air Force Equipping Policy

Strategic placement of Air Force assets, such as aircraft, is determined through corporate-level processes involving both the Active Component (AC) and Reserve Component (RC). Modernization of aircraft is addressed through a partnership between the requirements of the Core Function Lead Integrator (CFLI) for mission capability as well as requirements determined by the RC to meet assigned missions.

The Air Force actively works to meet the equipment needs of the RC. Corporate processes are used to strategically place aircraft, and CFLI 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.

C. Plan to Fill Modernization Shortages in the RC

In today's demanding, complex, and uncertain environment, the Air Force achieves its mission and leadership priorities through the efficient incorporation of the 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 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. The Air Force will continue to address equipment modernization across the Total Force to ensure mission-ready, mission-capable forces.

In February 2012, the Chief of Staff, United States Air Force (CSAF) issued a document called: *Air Force Priorities for a New Strategy with Constrained Budgets*. This document explains that 1) the Active and Reserve Components were carefully balanced to preserve both readiness and capability in the FY 2013 budget submission, and 2) a modern force is necessary to meet future challenges. With the challenging fiscal constraints, both the Air National Guard and the Air Force Reserve will continue to rely on the National Guard and Reserve Equipment Appropriation (NGREA) to play an increased role in preserving the operational force and strategic reserve that the Air Force needs.

D. Initiatives Affecting RC Equipment

In the February 2012 *Air Force Priorities for a New Strategy with Constrained Budgets*, the Chief acknowledges the hard choices the Air Force has made while aligning strategic guidance with fiscal realities by trading size for quality. This strategy affects the Total Force and difficult decisions for defense savings fall into five broad areas, one of which is modernization. Generally speaking, the Air Force is choosing to slow the pace and scope of modernization across our fleets, affecting both AC and RC. A delicate balance is sought between funding modernization and funding high priority programs such as the F-35, KC-46, and service-life extension of the F-16. These decisions will affect initiatives for both AC and RC fleets.

E. Plan to Achieve Full Compatibility between AC and RC

The Air Force continues to provide a balanced portfolio of capabilities across the 12 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 (ANG)

Top ANG Equipping Challenges

- Adequate funding for weapon system modernization efforts
- Sustaining legacy weapon systems
- Adequate funding for acquiring equipment to support civil authorities

On December 13, 1636, the National Guard (NG) became our Nation's first organized military institution. In December 2011, through a provision of the 2012 National Defense Authorization Act (NDAA), the NG, through the Chief, National Guard Bureau (CNGB), earned statutory membership in the Joint Chiefs of Staff. Other pertinent provisions of the bill for the NG include reestablishing the position of Vice Chief of the NGB at the three-star level, consideration of NG general officers for command of Army North and Air Force North, and authorization of funding for the National Guard State Partnership Program.

For centuries NG "Citizen-Soldiers and Airmen" have provided protection during natural disasters, trained to uphold high standards of readiness, and deployed overseas to protect their country's national interests. They accomplished all this while still maintaining their roots within their local community. These relationships continue to establish the NG as the cornerstone of the community and are pertinent to the success of both ANG missions: Federal and state. DoD Directive (DoDD) 5105.77, *National Guard Bureau (NGB)*, May 21, 2008, made significant provisions for increasing the influence of the National Guard in matters of support of civil authorities and, in conjunction with the FY 2008 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. The equipment used by the Guard to support state missions, or operations under Title 32, is the same equipment used to support Federal missions.

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 American citizens. The ANG's Federal mission is to provide well-trained and well-equipped units for homeland defense (HD) and other combat missions, and defense support of civil authorities (DSCA). Since 2008, the ANG has responded to more than 125,000 Air Force (AF) contingency requirements. Currently, the ANG is providing over 25 percent of the total AF's Middle East area of responsibility (AOR) requirement with more than 15,000 members mobilized or deployed. These Airmen are contributing to significant operations such as Noble Eagle, Enduring Freedom, Odyssey Dawn, Unified Protector, New Dawn, and relief efforts for the victims of the earthquake and tsunami in Japan. Additionally, as of August 2012, the ANG has conducted 368 fire retardant drops using the seven C-130 Modular Airborne Firefighting System (MAFFS) units in response to 35 wildfires. Other ANG members provide Federal support for domestic operations and are integral to the composition of the newly formed Homeland Response Forces (HRFs) and Chemical, Biological, Radiological, Nuclear, and High-yield Explosives (CBRNE) Enhanced Response Force Packages (CERFPs).

When not mobilized, each ANG unit is responsible to its governor or Commanding General (District of Columbia NG). The ANG's state mission is then to provide: protection of life and property and preservation of peace, order, and public safety through emergency relief support; search and rescue/recovery operations; support to civil authorities; maintenance of vital public

services; and counterdrug operations. ANG's involvement has included: state operations such as Gatekeeper, Hold-the-Line, and Safeguard; preparatory and relief support; state aid support during natural disasters such as Hurricane Irene, the recent flooding in the Central and Northeastern states, the Joplin tornado outbreak, the Western wildfires; and public safety and law enforcement during Olympic games and political campaigns, and several others.

National Guard Airmen provide important operational support to the Air Force with more than 30 percent of ANG members performing full-time active duty through mobilizations, deployments, and active duty operational support (ADOS). ANG "part-timers," also known as Traditional or Drill Status Guardsmen (DSG), provide their expertise through inactive duty training (IDT), annual training (AT), and active duty for training (ADT). Over the years, the Air Guard changed to an operational force where training was a by-product of operations rather than a traditional reserve force where support of the active force was often accomplished subsequent to training. Ideally suited to take on periodic and predictable work, these readily-accessible and skilled Airmen provide critical capabilities on an as-required basis. When their missions are complete, they return to their civilian employers and leave the Air Force payroll.

This mix of personnel enables the ANG to operate 17 of the 18 Air Sovereignty Alert/Aerospace Control Alert sites nationwide, which have provided the majority of airborne defense for the United States since 9/11. To perform this important mission, five of the alert units operate F-15s, while the others operate some of the oldest F-16s in the AF inventory. ANG legacy F-15C/Ds replaced grounded F-22s at two alert bases.

Presently, the ANG provides almost half of the Air Force's tactical airlift support, combat communications functions, aeromedical evacuations, and aerial refueling. The ANG's aging aircraft fleet faces significant sustainment and support costs. Modernizing, maintaining, and sustaining capabilities in this rapidly changing operating environment is one of the many current and future challenges the ANG mission support community faces. The NGREA funds are the lifeblood that keeps ANG legacy equipment viable and relevant for governors and combatant commanders.

The prolonged high operations tempo for the ANG is driving a need to concurrently modernize and recapitalize our aircraft fleets, a need also shared by the AC. The Air Force Total Force concept has afforded the ANG access to newer aircraft and equipment, which enables the ANG to remain prepared, relevant, and dependable in Federal missions. This concept has proven to be very successful for the Air Force in supporting Federal missions, but it creates equipment availability challenges for the ANG's domestic support missions. We continue to search for solutions to these ongoing issues.

B. Changes since the Last NGRER

Although the underlying equipping philosophy of the ANG has not changed, significant mission and programmatic changes continue. To support a Total Force approach in modernizing the Combat Air Forces, the ANG, in concert with the AC, has an ongoing effort to build associations to maximize effectiveness for the Service to meet its Federal requirements. As a result, fewer facilities, airframes, support personnel, etc. are required to ensure the relevancy, reliability, and responsiveness of these 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's work with the Air Force to integrate and stand up Predator units within the Future Years Defense Program (FYDP). With this partnership, the potential exists for more Predator units outside the FYDP.

To answer the concerns of Congress about management of the NGREA, the ANG developed process improvements to enable longer-term, higher-confidence planning by program offices, thus helping the ANG meet the Office of the Secretary of Defense (OSD) obligation rate standards for procurement funds. Each fall, three-year investment plans are developed using ranges of potential funding levels, based on NGREA in recent years. Prioritizing procurement requirements in funding bands (highest likelihood of funding, significant likelihood of funding, and potential likelihood of funding) will enable program offices to accomplish advanced planning to incorporate NGREA into planned contracts and separate NGREA-funded equipment purchases. Specifically, procurements with the longest contractual lead times will be prioritized in the band with the highest likelihood of funding. In this way, program offices will plan for NGREA as if it was budgeted, and they can have confidence that resources invested in advance planning and preparation will not be wasted. Three-year plans will be updated and shared with the program offices when the actual amount of NGREA becomes known for the next fiscal year and as execution of NGREA progresses, thus enabling the ANG to meet the OSD obligation rate standards.

1. Equipment On-hand

a. Current Status

The majority of ANG equipment is classified as "dual use." Recent data indicates the ANG has 95 percent of its support equipment requirements, as calculated from items in-use/on-hand versus items authorized, utilizing data sources from the Air Force Equipment Management System and Organizational Visibility Lists.

b. Average Age of Major Items of Equipment (MIE)

Overall, the average age of aircraft within the ANG is 27.8 years. See *Table 2* for the average age of selected aircraft MIE. This illustrates that the ANG operates and maintains the oldest aircraft in the Air Force. As a result of operating and maintaining this aging aircraft fleet, a Title 32 response may be limited to the use of a few available aircraft within a state or territory. However, while in a Federal role, additional units with similar aircraft can be called upon to complete a particular mission. Consequently, the older ANG aircraft are likely to impact domestic state missions negatively, but not necessarily have an ill effect on the Federal mission.

2. 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.

a. Hydrogen Fuel Leak Detector

Hydrogen fuel leak detectors are being purchased for the ANG fleet of F-16 aircraft to aid and reduce the costs in both dollars and manpower traditionally required to detect and repair aircraft

fuel leaks. Testing has shown a 69 percent reduction in aircraft downtime due to fuel system maintenance, 64 percent reduction in maintenance man-hours, 54 percent reduction of mean time to repair (MTTR), and 81 percent reduction in repeat write-ups. Other aircraft models may reap similar savings in costs and manpower by incorporating this technology into their fuel system maintenance. $4.7M is required to purchase leak detectors for all affected ANG units.

b. 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. As of August 2012, the new 72kW generator is scheduled to begin delivery midyear FY 2014. The ANG currently has $3.1M budgeted for generator repairs for FY 2013 and submitted a budget adjustment in the amount of $1.7M for FY 2014, down from prior years due to fielding the new equipment.

C. Future Years Program (FY 2014–FY 2016)

1. Modernization Efforts

The ANG's modernization efforts are founded on capability requirements identified by warfighters and first responders at the annual requirements conferences, and subsequently validated by the Air Force. Critical capability shortfalls are identified and vetted in an open and rigorous forum of warfighters, who are experts in their respective weapons systems, at an annual Weapons and Tactics Conference, the results of which are then 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 (C2); cyber; intelligence, surveillance, and reconnaissance (ISR); training; and simulator systems as well as weapons delivery, airlift, and tanker platforms. These capability shortfalls are documented in the annual *Weapons Systems Modernization Requirements Book*. During FY 2012, this process documented a $6.9B shortfall for modernization and recapitalization of the ANG aircraft fleet and associated equipment.

The Domestic Operations Equipment Requirements (DOERs) conference identifies critical capability shortfalls for the domestic mission. The DOERs conference took on a joint perspective in 2012, and the 2nd annual Joint Domestic Operations Equipment Requirements (JDOERs) conference will tentatively be held in September 2013. The objective of the conference is to define, validate, document, and prioritize materiel capabilities needed by National Guard units to support civil authorities at all levels of government. This process allows experts from the field to come together and prioritize equipment requirements to accomplish state missions, organized by functional areas within the Emergency Support Function (ESF) framework. The ANG and ARNG will use the direct output from this conference to jointly publish the annual JDOERs Book. The JDOERs 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 Guard's connections to our local communities and states.

2. Modernization Programs and Shortfalls

A-10: The AF continues to fund Operational Flight Program software updates for the common AC and RC fleet. A second ARC-210 radio was procured using NGREA funds to fill a Central Command (CENTCOM) urgent operational need. These radios allow simultaneous secure line-of-

sight (SLOS) and beyond line-of-sight (BLOS) communications capability with ground troops, and C2, The remainder of the ANG A-10 fleet was equipped using overseas contingency operations (OCO) funds. This upgrade was completed in 2012. A processor upgrade to the ALQ-213 countermeasures processor was also funded with NGREA. This upgrade enables ongoing software upgrades to the ALQ-213 as threats continue to evolve. NGREA is also funding the installation of a helmet-mounted integrated targeting (HMIT) system to speed target acquisition and increase pilot situational awareness, and the Lightweight Airborne Radio System version 12 (LARS v12) to speed location of downed Airmen when executing combat search and rescue missions. The ANG A-10 fleet is planned to receive the following upgrades in the next two years if sufficient NGREA funding is available: 1) a high resolution display to utilize the full imagery capability of new Advanced Targeting Pods-Sensor Enhancement (ATP-SE); 2) the digital radar warning receiver (RWR), which will significantly improve all RWR functions, reducing response times to radio frequency (RF) threats; 3) the electronic attack (EA) pod upgrade that will enhance self-protection against current and emerging RF threats; 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; 5) a replacement intercom and three-dimensional audio system to reduce the workload associated with interpreting communications from up to four radios simultaneously; and 6) an anti-jam embedded Global Positioning System (GPS)/inertial navigation system (INS) and antenna that will allow the A-10 to use GPS weapons in a contested environment.

C-5: The C-5A is programmed to receive the Avionics Modernization Program (AMP) upgrade, which is fully funded by the Air Force. The AMP upgrades include modern avionics that ensure compliance with Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO) equipment mandates for Communications Navigation Surveillance/Air Traffic Management (CNS/ATM). Installation of an aircraft defensive system (ADS) allows operations in hostile environments expanding flexibility to deliver cargo and personnel directly rather than stage through other airfields. ADS for ANG aircraft was funded with NGREA and OCO funds and is awaiting installation with anticipated completion in FY 2014. Any additional C-5 modernization efforts are currently on hold pending force structure decisions. Due to pending retirement of the C-5As, they will not receive the reliability enhancement and re-engining (RERP) upgrades.

C-17: Installation of Large Aircraft Infrared Countermeasures (LAIRCM) on the C-17 remains a top priority. All eight ANG C-17 aircraft are funded by supplemental appropriations to receive LAIRCM upgrades. The LAIRCM initial installations began in the second quarter of FY 2012. Maintaining common configurations and capabilities between the ANG and AC C-17 fleets is a priority for the Air Force.

C-130H: The AF fully funded LAIRCM with OCO funding. Presently, the ANG has LAIRCM installed on 83 of 123 aircraft, with expected completion by May 2014 of the remaining 40 aircraft. They are also funding improved cockpit armor and loadmaster crashworthy seats. The ANG has used NGREA to accomplish 31 installations of Real Time Information in the Cockpit (RTIC) capability that provides timely information to aircrews so they can participate in the present-day network-centric battlespace and greatly increase survivability in combat operations. The capability improves survivability by connecting it to intelligence and other networked sources of data. ANG is pursuing contract actions for the remaining aircraft in the C-130H fleet with FY 2012 NGREA. Installation of Chaff/Flare Yoke Mounted Switch and Square Window Doors for improved detection and countering of surface-to-air missile firings and loadmaster

wireless headsets to improve safety in the cargo compartment are underway using a combination of NGREA and AF funding. The loadmaster crashworthy seat and the Active Noise Cancellation System programs are currently partially funded via NGREA/Congressional additions and will require additional funding to complete all aircraft. Future requirements the ANG hopes to fund include a terrain avoidance warning system to improve aircraft safety when flying low level, and electronic takeoff and landing data to minimize ground time during high-tempo operations. The Air Force proposed cancelling the C-130H AMP in the FY 2013 President's Budget request, and the ANG is concerned that meeting CNS/ATM requirements will be significantly delayed.

C-130J: Although the C-130J brings major system enhancements to the C-130 fleet, protection against surface-to-air missiles and precision airdrop capabilities are necessary. Current unfunded modernization requirements for the ANG C-130J fleet include: LAIRCM, AAR-47 Missile Warning System (MWS) improvement, and Single Pass Precision-guided Airdrop capability. AF funding was provided to purchase and install the loadmaster crashworthy seats. Contracting actions are in work with NGREA funds to field wireless headsets for the C-130J loadmasters to reduce tripping hazards in the cargo compartment.

EC-130J: NGREA is being used in conjunction with funding from Air Force Special Operations Command (AFSOC) to support the LAIRCM integration contract, which AFSOC couldn't fund completely from its budget. Additionally, the ANG fully funded two programs with NGREA: satellite communications (SATCOM) radio upgrades and an enhanced situational awareness suite upgrade to bridge the gap in available capability while awaiting the longer term solution to be provided by AFSOC. The AFSOC solution of choice to meet the enhanced situational awareness requirement is referred to as "SAMS ESA." This strategy allows the warfighter to receive increased capabilities years before procurement through other funding strategies. Minimum capabilities for the EC-130J to stay relevant include procurement of LAIRCM "A" and "B" kits, a permanent situational awareness solution, external fuel tanks, and completion of the SATCOM upgrade. The capability for optimum employment of the EC-130J to stay relevant is the continued production of a solution similar to Situational Awareness Beacon with Reply/Fly-Away Broadcast System (SABER/FABS) data links, which will allow all the EC-130J aircraft to be Military Information Support Operations (MISO)-capable.

LC-130: The ANG completed evaluation of an eight-bladed propeller for the LC-130, to improve take-off performance in deep snow fields and reduce or eliminate use of the jet-assist takeoff rocket motors. ANG is ready to begin production and fielding of the new propellers on all LC-130s and is moving forward with updating the aircraft technical orders to support the propeller sets already purchased under the test program. Additional funding is required to equip the remainder of the LC-130 fleet. A production contract was awarded for a digital propeller synchronization system, and installation on all ten LC-130s will be complete January 2014. The crevasse detection radar was also fully funded with NGREA and is in operational use. The radar enables the LC-130 to identify and avoid crevasses in the deep field locations where they typically land. Future LC-130 requirements include CNS/ATM avionics upgrades to maintain worldwide flight capability.

HC/MC-130: The dual rail modification program was completed in 2012, and the AF is funding installation of an Emergency Locator Transmitter and Airborne Direction Finder. The ANG is also funding installation of loadmaster crashworthy seats, and upgrading aircraft defensive

systems by providing an ALQ-213 to fully integrate all defensive systems. The ALQ-213 program is a good example of three separate major commands (ANG, Air Force Reserve Command [AFRC], and Air Combat Command [ACC]) working together to efficiently modify and upgrade aircraft ahead of expectations. The AF funded an upgraded communication suite and an oil cooler augmentation program, but supplementary funding was required to fully cover the ANG aircraft. ANG was able to provide NGREA funds to complete the programs. The ANG fully funded replacement of the LARS v6 with the more capable LARS v12. This equipment provides the survivor's location from the latest survival radios, significantly reducing the time required to locate downed Airmen. The ANG is also fully funding a program to integrate heavy equipment airdrop capabilities into the cargo compartment to better support dismounted pararescue jumpers. The minimum capabilities for the HC/MC-130 to remain relevant are completion of the communication and data-link program, upgrading the electro-optical/infrared (EO/IR) sensor, which will provide mission critical data to the entire Combat Search and Rescue (CSAR)/Personnel Recovery task force, increased engine performance, and CNS/ATM avionics upgrades to maintain worldwide flight capability. Recapitalization of ANG HC-130s may begin in 2018.

E-8C Joint Surveillance Target Attack Radar System (JSTARS): An Analysis of Alternatives (AoA) was completed and briefed to the Air Force Requirement Oversight Council on November 30, 2011. The Air Force has not committed to a new start program, but is assessing its Ground Moving Target Indicator strategy in the context of the AoA findings and the constrained budget environment. However, the ANG continues to address current operational requirement priorities. The ANG has aggressively funded modernization for JSTARS with NGREA funds. This funding will deliver a communications suite with an integrated Internet-protocol (IP)-based chat capability, fulfilling a CENTCOM urgent operational need; purchase of initial spares for the Enhanced Land Maritime Mode for the radar; enhanced cooling carts to enable daytime primary mission equipment maintenance work in deployed locations; 8.33 kHz VHF radios for a voice-over-data, frequency-spacing capability; and upgraded SATCOM telecommunications service from Swift64 to Swift broadband. The AF has upgraded the primary mission equipment to resolve Diminishing Manufacturing Source issues with the Radar Airborne Signal Processors, Operator Work Station computers, and Blue Force Tracker hardware. Additionally, the AF is replacing the current Joint Tactical Information Distribution System terminal with Multi-functional Information Distribution System (MIDS) Joint Tactical Radio System. Reports to Congress in 2004 and 2005 documented the current TF-33 engines as having the most impact on reliability; consequently, they remain the most significant shortfall for JSTARS. Although re-engining the JSTARS would provide significant benefits to the mission, there is no funding available to pursue the project.

F-15C: The APG-63(v)3 Active Electronically Scanned Array (AESA) radar remains the first priority for modernizing the F-15C and is the same radar installed on AC F-15Cs. Congressionally-directed funding has purchased 39 of the 48 AESA systems required by the ANG. The second highest modernization priority is an out-of-band Infrared Search and Track pod to allow the F-15C to detect targets in contested environments. The AF program of record has been delayed by funding instability. Over the past few years, the AC has provided funding for digital video recorders, an upgraded central computer/software load, and limited aircraft rewiring. During this same time period, the majority of ANG F-15C modernization was accomplished with NGREA funding. This funding purchased equipment to complete the installation of the Joint Helmet

Mounted Cueing System (JHMCS) and night cockpit lighting modifications for all ANG F-15Cs not funded by the AC. It also purchased additional JHMCS pilot equipment and provided simulator upgrades for the F-15C flying training unit. These simulators support JHMCS and night-vision-goggle training for both the ANG and AC pilots. In response to a United States Northern Command (USNORTHCOM) urgent operational need for BLOS communication capability for alert aircraft, the ANG worked with the system program office to field an initial, standalone SATCOM capability with NGREA. This effort will meet the urgent need up to two years earlier than the FY 2012 program of record. The AC is planning to fund the remaining aircraft and develop a fully integrated installation in FY 2012–FY 2013. The ANG is also working with the F-15 program office to integrate the Advanced Targeting Pod (ATP) and a new cockpit display to enable visual identification of targets of interest on night Aerospace Control Alert missions. NGREA will be used to procure and install the hardware and wiring required to carry the ATP. NGREA will also be used to procure and install the hardware required to carry the back-of-launcher external countermeasures system. The ANG is also using NGREA funding to field a Vertical Situation Display (VSD) upgrade. The current VSD is too small and lacks color symbology to adequately display Link 16 and AESA radar targeting symbology, reducing pilot situational awareness. The AF program of record timeline is insufficient to meet ANG homeland defense requirements. The Air Force stopped sustainment of the Tactical Electronic Warfare System in FY 2013 and re-directed the savings into the replacement Eagle Passive Active Warning and Survivability System (EPAWSS). The F-15E is the lead for EPAWSS, followed by the F-15C. The ANG is concerned that ANG F-15C aircraft will have a significant gap in electronic warfare capability for many years.

F-16: The ANG is using NGREA funds to install SLOS and BLOS communications suites, higher data rate processors, high-resolution Center Display Units (CDUs), the Scorpion helmet-mounted integrated targeting (HMIT) systems, enhanced self-protection suites, and the advanced identification, friend or foe (AIFF) combined interrogator transponder. Additionally, USNORTHCOM identified AIFF and BLOS capabilities as critical requirements for air defense of the homeland. Over the last three years, ANG NGREA funding has supported Block 30 HMIT, CDU, ALQ-213 processor upgrades, and Ethernet, X-mux, and the Commercial Fire Control Computer, which increases avionics processing power and bandwidth to enable carriage of advanced weapons, such as the small diameter bomb. The AF is funding the Operational Flight Program software updates required to support all of these systems, but all modification hardware and installs are NGREA-funded. ANG post-block funded programs include Block 42 ALQ-213, AIFF, and Block 40/50 JHMCS purchases. The AF has funded the Block 30/40/50 SLOS/BLOS and digital video recorder upgrades, Block 40 IFF transponders, and upgraded Block 50/52 AIFF. The lack of funding for Block 40 AIFF in the current AF procurement program will result in a capability shortfall as these aircraft move to the ANG as the F-35 is fielded in the AC. Additionally, the RWR system (ALR-69) on pre-block (25/30/32) and Block 42 F-16s is nearing obsolescence and the replacement system (ALR-69A) is unfunded. To counter the proliferation of IR-guided man-portable shoulder-launched surface-to-air missiles, the ANG is investigating procurement of an off-the-shelf pylon-mounted MWS for the pre-block F-16 fleet. If sufficient FY 2013 and FY 2014 NGREA is available, ANG will procure a second ARC-210 radio for pre-block F-16s to enable simultaneous SLOS and BLOS operations, and a three-dimensional audio system to reduce the workload associated with interpreting communications from multiple radios and maximize the effectiveness of a potential F-16 MWS.

HH-60G: The ANG HH-60G fleet is undergoing an NGREA-funded program to enable direct communication with civilian emergency responders. The AF and the ANG are teaming up to replace SATCOM, VHF/FM, VHF/AM, and UHF/AM radios with four ARC-210 radios. The ANG is funding the first aircraft modification and associated support, such as technical order updates, to validate the new system while ACC budgets for the retrofit funding for the remaining aircraft. The ANG funded the installation of a modified heater for the crew compartment improving crew comfort in extremely cold temperatures, and a temporary smart multifunction color display (SMFCD), which includes a data link to connect the HH-60 to the digital net-centric communication environment. Additionally, the AF funded installation of an improved vibration monitoring system, improved altitude hover and hold stabilization, LARS v12, and a defensive weapon system. The minimum capabilities required to stay relevant are the upgraded communication program, a permanent SMFCD solution with data link, and improved defensive capabilities to include a hostile fire indicator. The capabilities for optimum employment include a helmet-mounted cueing system with point designation, and precision coordinate-generation capabilities. Furthermore, the HH-60G fleet is rapidly aging and experiencing an increase in maintenance rates and component failures, which dictate a recapitalization effort. An approved and funded initiative to replace HH-60s lost in combat will return the number of aircraft to 112 by FY 2016. The ANG is scheduled to receive a portion of these aircraft (Congressionally-mandated).

KC-135: Changes in employment concepts put the KC-135s in high-threat areas. This vulnerability demands addition of LAIRCM capability. ANG, with Air Mobility Command (AMC) support, recently completed ground and compatibility flight tests to evaluate a low-cost podded solution originally developed by the Department of Homeland Security for commercial aircraft use. The ANG has also partnered with the Navy to create an affordable path forward for the podded LAIRCM system. There is no AF funding for the IR countermeasures on the KC-135. However, the AF is funding numerous CNS/ATM compliance items, including an integrated flight director/autopilot and electronic engine instrument display, all of which are included in the Block 45 upgrade. For the KC-135 to continue its mission in the future, the ANG has established a critical need for a tactical data link (TDL)/RTIC system for crew situation awareness in high-threat environments and enhanced external overt/covert lighting to reduce the chance of midair collisions when operating at night in high-threat environments. The ANG will fund these initiatives if sufficient FY 2013 or FY 2014 NGREA becomes available.

Remotely Piloted Aircraft (RPA): The ANG has eight operational RPA units: five MQ-1 units, located in AZ, CA, ND, TX, and OH; a classic associate in NV; plus two MQ-9 units, one in NY and one in TN. The ANG also operates one MQ-1 Formal Training Unit (FTU)/field training detachment (FTD) in CA and one MQ-9 FTU/FTD in NY. The ANG stands to gain an additional four MQ-9 units in the FY 2013 President's Budget request. Squadron operations centers (SOC) are the key tactical C2 link between individual unit RPAs and deployed locations and provide a common operating picture between the two, as well as supporting intelligence units. Critical capabilities required for the MQ-1 and MQ-9 are upgrading the SOCs to a common baseline; multi-level secure communication suites; independent and redundant data architectures to improve mission reliability; airspace integration systems such as sense and avoid, along with subsystems that allow flight in civilian FAA-controlled airspace; and a rapid deployment launch and recovery capability for responding to requests for support during homeland operations.

C-32B: In FY 2012, the C-32B received NGREA for the first time. AFSOC requested support from the ANG in meeting a critical mission requirement for SATCOM capability with encryption in the K_u band for the C-32B, and did not have funding immediately available. The ANG was able to provide NGREA funds to be able to partially modernize the C-32B communication equipment while AFSOC continues to attempt to establish a long-term funding solution.

C-38: The C-38 has limited range, is difficult to maintain, and is expensive to operate due to diminishing manufacturing sources of aircraft parts. Replacing the C-38s would address several capability gaps identified in a formal 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.

C-40: With availability of AF funding, LAIRCM systems have recently been installed on these aircraft along with Integrated Approach Navigation/Vertical Situation Display and the Enhanced Vision System. The ANG has funded additional avionics upgrades that will bring the ANG C-40s to a common configuration with the AFR C-40Cs. ANG has also funded a high-speed data internet capability, which will allow passengers to be connected via non-secure internet and e-mail while airborne. Current C-40 requirements for the ANG fleet call for four aircraft, three of which have been procured. A fourth aircraft would ensure consistent mission support and minimize the impact of unplanned maintenance.

C-21: All 21 ANG aircraft have been modified to comply with reduced vertical separation minimum (RVSM) airspace requirements. AMC funded the two aircraft designated for exclusive use as distinguished visitor airlift, while the ANG used NGREA funds to install the RVSM upgrades on the 19 bridge mission aircraft. Enhanced Mode S (EHS) is also required to operate in Europe; however, the C-21A has a waiver to operate without this equipment. The EHS modification is on hold, pending outcome of a decision about retiring C-21 aircraft.

Battlefield Airman (BA): BA capabilities are associated with Combat Controllers, Guardian Angels (GAs), and Tactical Air Control Parties (TACPs). The ANG has been very active in the past year supplying numerous solutions to meet many critical capability gaps. In the past year, the ANG has used NGREA to provide a BA Operations kit. The kit consists of a minicomputer, video receiver, PRC-152 radio, and a microlite Situation Awareness Data Link radio. This kit will provide the BA with the most complete situational awareness picture of the battle space to date. In the past year, the ANG has completed procurement of two NGREA-funded close-quarter combat training devices and still has two more to complete in the future. The ANG has also completed procurement of water rescue craft in the past year. Many programs are ongoing and will continue to be funded in the future with NGREA funds. These programs will continue supporting modernization of the BA Operations kit, short-wave infrared night vision devices, weapons accessories, communication equipment, and personal protective equipment. The minimum capabilities required to stay relevant are upgraded communication equipment to include data link with video downlink capability. The capabilities for optimum employment require air deliverable and tactical recovery vehicles, and flexible weapons options to include less-than-lethal weapons. Attempts to modernize GA weapons to this point have been unsuccessful. GAs are only authorized weapons through the Air Force Security Forces Center, but their mission is more suited to special operations.

Control and Reporting Center (CRC)/Air Control Squadron: C2 capabilities are morphing into a more agile and right-sized deployable capability. Significant realignments of mission capabilities are projected to streamline battle management internal to organic C2 mission assets. Continued mission-requirements creep outpaces planned upgrades to mission capabilities and service life extension programs (SLEPs), leading to numerous shortfalls within this mission area. Air Force Space Command's most recent plan to remove Theater Deployable Communications assets from the CRC will significantly impact to ANG training capabilities. If sufficient funding exists, NGREA may be used to address the shortfalls in the CRC internal C2 network and data-link capabilities, fulfill live mission training requirements, and enable the most effective approach to support airframe and ground mission crew training scenarios. Previous NGREA support ($2.5M) enabled the CRC to field a Power Distribution Panel system that exceeds the DoD goals for deployable operational energy conservation plans and distribution. However, this is just the first phase, and deployable power grids and standardized power cabling and connectors are required to finish this effort ($2.3M). Tactical generators are still required to reduce forward-deployed assets and to realize 20 percent fuel consumption in support of mission requirements ($10M). ACC's ongoing efforts through a SLEP for the AN/TPS-75 ($36M) and planned replacement with the Three Dimensional Expeditionary Long-Range Radar ($2.2B) will assure these systems meet current and projected mission requirements. The AN/TYQ-23 SLEP and modernization ($40M and $74M) efforts will be combined to address critical mission shortfalls and address urgent requirements identified in recent evaluations. These efforts will ensure the CRC can meet any tasking requiring C2 battle management capabilities.

Component Numbered Air Force/Air Operations Center: ACC completed fielding of the Full Training Capability (FTC) equipment suites to all seven of the required Air and Space Operations Center (AOC) integration units during FY 2011. The FTC provided the basis for the RC units to achieve mission qualification and continuation training requirements, but will require further capability enhancements to meet all mission readiness training and Distributed Mission Operations (DMO) requirements. For example, installation of the Core Radio Package (CRP) at each of the seven RC units, along with the FTC suites, will provide more realistic training and enhance unit readiness in both the Combat Operations Division and Joint Interface Control Cell. The CRP tentatively consists of multiple PRC-117G, URG-III, and MIDS LVT-11 capabilities with a cost per location of $617K, and there is a shortfall for FY 2013 of $4.4M for the CRP capability. In addition, there is a shortfall of $10M for upgrades to the core AOC Weapon System, which are included in the RE-11 system release. These RE-11 upgrades, which are being fielded to each of the AC AOCs, need to be near-simultaneously fielded to the AOC's associated RC-integration unit to ensure continuity of operations between the RCs and their AOCs. The RE-11 upgrades impact all divisions of the RC AOCs and reach to specific tasks, such as DMO, unit mission readiness, and training requirements. Any delays will have significant impacts on previously established workflows and mission readiness parameters established between the RC units and their respective AOCs.

Expeditionary Air Traffic Control (ATC), Deployable Radar Approach Control: In performing its ATC missions, the ANG uses the AN/MPN-14K system; this system operates on 1950s analog Radar Approach Control (RAPCON) technology that received minor radar upgrades in the 1980s. As current technology is now digital and beyond, many of the subsystems in the AN/MPN-14K are no longer commercially available or produced. As they fail and need repair or replacement, equipment parts and entire subsystems must be designed and

manufactured at huge costs to DoD. Because of these costs, the AF and ANG are cannibalizing systems just to keep a limited number of critical units operational. As the FAA and their counterpart civilian ATC organizations throughout the world continue to modernize to digital ATC systems, the AN/MPN-14K analog system is no longer a viable 21st century option for peacetime operations or tactical deployment interoperability in support of national defense initiatives. Replacement systems for the ANG MPN-14K RAPCON are being funded by the AF under the Air Traffic Control and Landing System program element. A total of 10 digital Deployable RAPCON (D-RAPCON) systems will be procured for the ANG. The D-RAPCON initial operational capability is planned in FY 2016 and full operational capability in FY 2020. D-RAPCON will also include the newly developed Deployable Instrument Landing System as a replacement for the AN/MPN-14K Precision Approach Radar component.

Live, Virtual, Constructive (LVC) Simulation and Range Instrumentation: LVC is the overarching training technology that encompasses all aspects of simulation, including DMO and range instrumentation. Supporting LVC is the ANG Distributed Training Operations Center, which provides event management and network engineering to over 100 organizations. LVC will enable the ANG to reduce aircraft sorties dedicated to only training and, in many cases, provide a more realistic mission rehearsal capability. Current ANG simulation programs include: the production and fielding of the KC-135 Boom Weapon System Trainer; the ANG Advanced Joint Terminal Attack Controller Simulation System, which requires $16M for full deployment; two F-16C four-ship mission training centers at a cost of $35M; technology and obsolescence upgrades for the F-15 and F-16 unit simulators requiring $6 to $8M per year through the FYDP; LVC capability improvements at the seven ANG AOCs, 601st AOC, and four Air Defense Sectors requires $3M; and a $2M HH-60G procedures trainer for the 150th Fighter Wing in support of HH-60G formal training. Current LVC programs at the ANG's 14 ranges include High Fidelity Surrogate Target Systems which require an additional $4.8M for full deployment, and Training Data Link Systems requires an additional $1.3M for equipment and site integration at the three Combat Readiness Training Center ranges. Additional unfunded requirements include two C-130J Weapons System Trainers at $50M and an E-8A Mission Crew Trainer at $60M. The LVC relationship to air-to-ground range instrumentation uses air combat maneuvering and instrumentation systems, electronic warfare threat system capability, high-fidelity surrogate targets and data link manipulation to provide a complex robust training environment to meet the Combat Air Forces training requirements.

Cyber Warfare (CW) and Information Operations (IO): ANG CW/IO force structure consists of nine units, together providing CW/IO capabilities supporting the AF, combatant commanders, and national-level agencies by conducting cyberspace force application, cyberspace defense, cyberspace support, influence operations, and related planning activities. These capabilities will continue to require regular modernization and technical refresh, as the information technology environment changes rapidly. Funding received through NGREA in FY 2010 ($1.7M) has allowed the ANG to equip and modernize two of the ANG CW units in KS and MD with a baseline Cyberspace and Critical Infrastructure Range (CCIR). The ANG CCIR and associated equipment is a minimum baseline for training; exercise; capability testing; analysis; and tactics, techniques, and procedures development and can be connected to the Joint Information Operations Range (JIOR) to support exercise and other events up to the top secret or sensitive compartmented information (TS/SCI) level. In FY 2012, the KS ANG CCIR supported United States Cyber Command Opposing Force (OPFOR) through the JIOR. FY 2011 NGREA

($3.8M) enabled the equipping of two additional CW units (RI, DE) and added defensive and offensive training stations and information technology equipment for remaining CW units in KS, MD and WA. FY 2012 NGREA will enable the fielding of an additional CCIR to a new CW unit in WA, provision network traffic simulators to currently fielded CCIRs in DE and RI, and provide KS with a Red Team kit for conducting cyber Red Team and OPFOR exercise events. CW/IO capabilities will greatly depend on the mission requirements and threats, but will require technology refresh and migration to distributed sharing of information and data to analyze and predict behavior of cyber-targeted systems as the threat vector changes.

RC-26B: The RC-26B faces numerous modernization challenges. The aircraft is unique to the ANG and thus receives little funding from the AF. Currently, the RC-26B is tasked operationally with providing capabilities for United States Special Operations Command (USSOCOM) to fill a long-term capabilities gap. Six aircraft have been modified with USSOCOM funding to a Block 25 standard, adding additional communication capabilities and self-protection for use by Special Forces. The Block 20 variant continues to provide critical capability integration between military and civil authorities for a variety of domestic missions. Minimum capabilities to stay relevant include 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 program. Additionally, future enhancements will include upgrades to aircraft performance, the advanced EO/IR turret, power source, and addition of an external, podded, multi-mission capability. All upgrades are dependent on NGREA funding.

SENIOR SCOUT: Upgrade and modernization efforts funded in the SENIOR SCOUT program encompass Baseline five upgrades to four SENIOR SCOUT shelters. In addition to program funding, multiple capabilities were funded with FY 2010 NGREA: SENIOR SCOUT remote operations valued at $3.8M, Super Resolution Direction Finding valued at $4.5M, and an advanced, signal collection capability valued at $5.0M. FY 2011 NGREA funded engineering certification and interface kits for SENIOR SCOUT onboard a C-130J valued at $4.8M. The SENIOR SCOUT program is pending divestiture in FY 2013.

Distributed Common Ground System (DCGS): The ANG Distribute Ground Station (DGS) nodes' systems and capabilities continue to be upgraded in-synch with their AC counterparts. For instance, the Distributed Mission Crew Communication system is being fielded through the AF DCGS program office to all AC and ANG DGS nodes to provide the critical capability for RPA crews and DCGS crews to integrate via real-time voice communications. However, a critical capability for the DCGS remains a SATCOM/wideband link (e.g., Link 16) capability to be able to provide near real-time threat warnings from platforms like the RC-135 and Airborne Warning and Control System. Additionally, the ANG is in the acquisition planning phase to acquire an unclassified mobile processing, exploitation, and dissemination capability with NGREA for use at ANG DGS locations to support domestic operations.

Security Forces (SF): The ANG has been active in attempting to meet SF equipment shortfalls. Current programs include Surveillance, Target Acquisition, and Night Observation Equipment; Less-than-lethal Equipment; Explosive Detection Kits; and Modular Small Arms Training Systems (MSATS). These programs are ongoing and are expected to continue into FY 2013 and beyond. The ANG Security Forces forecast modernization shortfalls in FY 2013–FY 2016: 1) $1.8M for

Simulated Training Munitions, 2) $8M for Explosive Detection equipment, 3) $6M for Less- than-lethal Equipment, 4) $18M for SF Mobility bags to completely equip our SF forces for deployments, and 5) $95M for the MSATS solution to fully meet the requirement. The MSATS solution is being developed with cooperation from both the ARNG and the ANG to make the most efficient use of available funds. With only 12 ranges in operation within the ANG, we must heavily rely upon other agencies to utilize their small arms range space to prepare our forces for their wartime mission. The result is scheduling conflicts and, in some cases, expenses for the use of the small arms range. It becomes a daunting task to integrate our Airmen's training in small arms ranges owned and operated by outside agencies, both civilian and military. The minimum capabilities required to keep SF relevant are continued funding of mobility bags. The capabilities for optimum employment require continued support for ongoing programs, such as Less-than-lethal weapons, Explosive Detection Kits, and MSATS.

Medical: The ANG currently maintains four Expeditionary Medical Support (EMEDS) +25 and six Air Transportable Clinic medical treatment platforms. ANG is in the process of upgrading the EMEDS Basic module to the new EMEDS Health Response Team (HRT) module. The Air Force Medical Service (AFMS) is upgrading its EMEDS Basics to EMEDS HRTs starting this year. AFMS plans to modernize the EMEDS +10 and +25 modules next. The 10 new HRF units have passed the Exercise Evaluations and achieved full operational capability. The 17 CERFP units are receiving the upgraded medical equipment and supplies funded last year to be current with the approved allowance standards.

The medical resupply process has been established this year. The process requires six HRF/CERFP medical resupply assemblages and one EMEDS HRT resupply assemblage to reduce the supply chain risk to an acceptable level. AFMS is working on the EMEDS HRT resupply allowance standards. ANG recently approved the HRF/CERFP medical resupply allowance standards, and will fund one assemblage this fiscal year. ANG plans to fund and build five more in FY 2013. The ANG anticipates total shortfalls of $8M–$10M based on an anticipated new allowance standard block upgrade for the EMEDS +10/+25, the HRF/CERFP resupply assemblages, and EMEDS HRT resupply assemblages.

Engineering: Prime power, route clearance, search and rescue, and firefighting equipment shortages continue to limit the ANG's ability to concurrently perform home station, overseas deployments, and domestic support missions. For example, prime power requires in excess of $17M in power generation capability. Insufficient capacity exists in all ten Federal Emergency Management Agency regions. To redress the lack of capacity, the ANG purchased a power generation package for the 150th Civil Engineering Squadron as an initial investment using NGREA, and plans additional purchases as funding becomes available. Additionally, Bomb Squad Emergency Response Vehicles (BSERVs) are a critical requirement to facilitate explosive ordnance disposal (EOD) response domestically. The BSERVs, with a shortfall of $5.1M, were ranked as one of the top five priorities for Emergency Support Function 3. First responder communication assets are another critical shortfall. Presently, they do not possess the communication assets to meet Homeland Security Presidential Directives 5 and 8 for interoperability with other government agencies for DSCA or domestic operation responses. This more than $10M requirement has been identified across the functional spectrum as a serious shortfall to the ANG's ability to respond to homeland contingency operations, potentially hindering and definitely limiting local, state, and federal disaster responses.

3. Equipment Shortages and Modernization Shortfalls at the End of FY 2015

For the past three years, the ANG has emphasized modernization, upgrades, and procurement in two broad areas, communications and firefighting. These efforts were focused in both combat operations and domestic operations. In communications, the ANG sought to leverage networks and data links to bring current information and data directly to aircraft cockpits and Battlefield Airmen (Joint Terminal Air Controllers, Tactical Air Control Parties, Pararescuemen); improve situational awareness for air defense operations; provide a common operational picture for Joint Force Headquarters-State; and provide capability to bridge communications between military and civil authorities. In firefighting, the ANG brought aboard an improved Modular Airborne Firefighting System (MAFFS)-2 in time for the CY 2012 wildfire season and purchased upgraded and newer firefighting vehicles, protective equipment, and equipment for rescue operations. For details on equipment and modernization shortfalls at the end of FY 2016, see the description of individual weapons systems modernization in the preceding "Modernization Programs and Shortfalls" section of this chapter, as well as the "ANG Equipment Shortfalls" section in Appendix B.

D. Summary

While support equipment levels remain comparable to AC levels, NGREA funding is vital to ANG modernization efforts and domestic operations equipping strategy. 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 Enterprise. Furthermore, the domestic equipping needs of the states will be severely hindered, limiting the response the ANG can provide to civil authorities. It must also be noted that with ongoing Total Force Integration actions, the overall authorizations and on-hand balances continue to shrink, resulting in a fewer equipment items in the availability ratios for ANG support to civil authorities.

Despite the shrinking budgets and equipment balances, along with modernization effort shortfalls, the ANG will continue to strive to adapt and 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 military operations in Afghanistan and in supporting civil authorities such as for Operations Gatekeeper, Hold-the-Line, and Safeguard. We are ready to respond to any tasking with fully mission-ready professionals equipped with capable, yet aging, weapon systems.

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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. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Air Refueling							
Air Refueling, KC-135R	KC-135R	$57,700,000	138	138	138	138	138
Air Refueling, KC-135T	KC-135T	$54,000,000	24	24	24	24	24
Airlift							
Airlift, C-130H	C-130H	$29,200,000	111	111	111	111	111
Airlift, C-130J	C-130J	$64,000,000	19	19	19	19	19
Airlift, C-17A	C-17A	$219,200,000	20	26	32	32	32
Airlift, C-5A	C-5A	$119,300,000	12	3	0	0	0
Airlift, LC-130H [1]	LC-130H	$71,000,000	10	10	10	10	10
Airlift, WC-130H	WC-130H	$60,000,000	8	8	8	8	8
Electronic Warfare (EW)							
EW, E-8C	E-8C/AOT	$251,500,000	13	13	13	13	13
EW, EC-130J	EC-130J	$90,000,000	3	3	3	3	3
EW, RC-26B	RC-26B	$1,500,000	11	0	0	0	0
Fighter							
Fighter, A-10C	A-10C	$10,700,000	36	36	36	36	36
Fighter, F-15C	F-15C	$31,000,000	92	92	92	92	92
Fighter, F-15D	F-15D	$31,000,000	19	19	19	19	19
Fighter, F-16C	F-16C	$19,500,000	254	254	254	254	254
Fighter, F-16D	F-16D	$19,500,000	22	22	22	22	22
Fighter, F-22A	F-22A	$185,000,000	18	18	18	18	18
Operational Support							
Op Support, C-21A	C-21A	$3,100,000	2	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	HC-130N	$19,100,000	5	5	5	5	5
Rescue, HC-130P	HC-130P	$19,100,000	2	2	2	2	2
Rescue, HH-60G	HH-60G	$17,600,000	15	15	10	0	0
Rescue, HH-60M	HH-60M	$17,600,000	0	2	11	15	15
Rescue, MC-130P	MC-130P	$75,000,000	4	4	4	4	4
Miscellaneous Equipment							
MC-12	MC-12	$17,000,000	42	42	42	42	42
MD-1A/B	MD-1A/B	$2,500,000	21	21	21	21	21
MQ-1B	MQ-1B	$4,500,000	36	28	24	24	24
MQ-9A	MQ-9A	$16,500,000	7	12	7	7	7

(1) Four LC-130s are National Science Foundation (NSF)-owned.

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Equip No.	Average Age	Remarks
Air Refueling			
Air Refueling, KC-135R	KC-135R	51	
Air Refueling, KC-135T	KC-135T	53	
Airlift			
Airlift, C-130H	C-130H	23	
Airlift, C-130J	C-130J	8	
Airlift, C-17A	C-17A	12	
Airlift, C-5A	C-5A	41	
Airlift, LC-130H	LC-130H	27	
Airlift, WC-130H	WC-130H	47	
Electronic Warfare (EW)			
EW, E-8C	E-8C	12	ANG has the TE008A (E-8 trainer) with 22 years average age
EW, EC-130J	EC-130J	12	
EW, RC-26B	RC-26B	18	
Fighter			
Fighter, A-10C	A/OA-10C	32	
Fighter, F-15C	F-15C	29	
Fighter, F-15D	F-15D	29	
Fighter, F-16C	F-16C	23	
Fighter, F-16D	F-16D	24	
Fighter, F-22A	F-22A	7	
Operational Support			
Op Support, C-21A	C-21A	28	
Op Support, C-32B	C-32B	9	
Op Support, C-38A	C-38A	15	
Op Support, C-40C	C-40C	9	
Rescue			
Rescue, HC-130N	HC-130N	19	
Rescue, HC-130P	HC-130P	46	
Rescue, HH-60G	HH-60G	22	
Rescue, MC-130P	MC-130P	46	
Miscellaneous Equipment			
MQ-1B	MQ-1B	4	
MQ-9A	MQ-9A	3	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016
Modification of Inservice Aircraft			
A-10	$23,389,000		
F-15	57,169,000	$89,370,000	$81,763,000
F-16	2,216,000	1,755,000	1,684,000
F-22A	22,038,000	21,900,000	28,687,000
C-17A	31,907,000	22,209,000	1,985,000
C-130	8,260,000	7,143,000	4,990,000
C-135	12,574,000	18,923,000	19,743,000
E-8	46,693,000	18,342,000	
H-60	9,047,000	6,743,000	1,885,000
Aircraft Replacement Support Equipment	917,000		
Vehicular Equipment			
Passenger Carrying Vehicles	184,000		
Medium Tactical Vehicle	764,000		
Security and Tactical Vehicles	140,000		
Runway Snow Removal & Cleaning Equipment	1,274,000		
Electronics and Telecommunications Equipment			
Air Traffic Control & Landing System	14,859,000		
Battle Control System	994,000		
AF Global Command & Control System	400,000		
Theater Battle Management C2 System	150,000		
Air & Space Operations Center - Weapon System	10,000,000		
Tactical Communications-Electronic Equipment	7,613,000		
Base Communications Infrastructure	18,522,000		
Communications & Electronics Modifications	1,501,000		
Other Base Maintenance and Support Equipment			
Night Vision Goggles	363,000		
Mechanized Material Handling Equipment	2,046,000		
Contingency Operations	13,400,000		
Total	**$286,420,000**	**$186,385,000**	**$140,737,000**

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013
FY 2011 Title IX NGREA Equipment			
Air Superiority/Global Precision Attack			
Advanced Targeting Pods	$80,561,082		
E-8C Communications Suite Upgrade	14,999,996		
A-10/F-15/F-16 Helmet Mounted Cueing System	10,056,143		
A-10/F-15/F-16 Communication Suite Upgrade	4,708,725		
A-10/F-15/F-16 Avionics Upgrades	5,137,385		
A-10/F-15/F-16 Advanced Identification Friend or Foe (AIFF) and Sensor Enhancements	1,811,237		
A-10/F-15/F-16 Defensive Systems Upgrades	1,557,148		
Rapid Global Mobility			
C/HC/MC-130/KC-135 Data Link and Sensor Upgrades	17,150,605		
C-40C High Speed Data	2,500,000		
Large Aircraft Infrared Countermeasures (LAIRCM) Self Protection Suite	4,169,684		
C-130 Propulsion Improvements	1,920,282		
C-130/C-17/C-5 Loadmaster Safety Equipment	1,600,000		
LC-130 Polar Ice Crevasse Detection Radar	200,000		
Simulation/DMO/Training			
KC-135 Boom Operator Simulator System	11,822,800		
JTAC Desktop Trainers with ARCNet Gateway	1,020,000		
F-16 Weapon System Trainer/Unit Training Device Technology Refresh	712,770		
MQ-9 Reaper Mission Training Device	226,007		
Search and Rescue/Special Operations/Agile Combat Support			
Special Tactics/JTAC Assault Zone Equipment	9,639,936		
Urban Search and Rescue Kits	9,179,082		
Security Forces Equipment	4,977,493		
HH-60G Communication and Avionics Upgrade	4,559,740		
Guardian Angel Combat Survivability Equipment	3,533,329		
Personnel Recovery Task Force Operations Center	2,404,138		
Multiple Mission Design Series (MDS) Leak Detectors	414,500		
H/MC-130 Cargo Equipment and Engine Upgrade	104,368		
Battlefield Airman Communication and Data Link Equipment	2,334,846		
Global Integrated ISR/Space Superiority/Cyberspace Superiority/C2/Incident Awareness and Assessment			
Senior Scout Modernization	4,786,316		
Cyber Modernization - Cyber and Critical Infrastructure	2,499,020		
Domain Infrastructure Capability Enhancement	672,000		
Transportation			
R-11 Fuel Servicing Tank Truck Adapters	36,800		

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2011	FY 2012	FY 2013
Communications			
Joint Incident Site Communications and ASA Command Post Consoles	9,917,237		
Public Works and Engineering			
Airfield and Route Clearance Equipment	5,523,198		
Potable Water Production and Storage Equipment (ROWPU)	993,162		
Explosive Ordnance Disposal Personal Protective Equipment (PPE)	228,500		
Firefighting			
Personal Protective Equipment Structural Firefighting	4,142,935		
Emergency Management			
Mobile Emergency Operations Center (MEOC)	4,991,070		
Mass Care			
Disaster Relief Bed Down Sets (DRBS)	6,592,421		
Fatality Search and Rescue Team Equipment	61,005		
Public Health			
Modernization of Existing Expeditionary Medical Support	9,218,368		
HAZMAT Response			
HAZMAT Response Package	3,036,672		
FY 2012 Title IX NGREA Equipment			
Air Superiority/Global Precision Attack			
A-10/F-15/F-16 Avionics Upgrades		$21,439,882	
A-10/F-15/F-16/HH-60 Helmet Mounted Cueing System		28,711,020	
A-10/F-15/F-16 Advanced Identification Friend or Foe (AIFF) and Sensor Enhancements		9,212,310	
A-10/F-15/F-16 Defensive Systems Upgrades		5,117,964	
A-10 AN/ARS-6 V12 Lightweight Airborne Radio System (LARS)		7,998,926	
A-10/F-15/F-16 Communications Suite Upgrade		4,418,216	
Advanced Targeting Pods		18,762,691	
E-8C JSTARS Communication and Avionics Upgrade		10,400,000	
Rapid Global Mobility			
C-130/KC-135 Tactical Data Link and Communications Upgrade		44,559,200	
C-130 Propulsion Upgrade		4,315,000	
C-40C High Speed Data		3,399,186	
C-130H/J, KC-135, EC/HC/MC-130 Survivability		700,000	
C-130J Increased Fire Fighting Safety		150,000	
Simulation/Distributed Mission Operations (DMO)/Training			
KC-135 Boom Operator Simulator System (BOSS) / Flight Deck Simulator Upgrade		10,995,177	
ANG Range and Instrumentation Upgrades		7,934,873	
Joint Terminal Air Controller (JTAC) Simulators with ARCNET Gateways		4,293,613	
F-15/F-16/A-10 Simulators		2,650,234	
MQ-9 Reaper Mission Training Device (MTD)		336,000	
Air Operations Center Communications (AOC) Training Lab		291,138	
Personnel Recovery/Special Operations			
HC/MC/EC-130 Communication and Avionics Upgrade		10,507,860	
EC-130/C-32 Communication Upgrade		6,400,000	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2011	FY 2012	FY 2013
Security Forces Equipment		8,486,205	
Tactical Air Control Party (TACP) Survivability Equipment		5,098,781	
Battlefield Airmen Communication and Data Link Equipment		1,958,030	
Guardian Angel Combat Survivability Equipment		1,984,145	
HC/MC-130 Cargo Compartment Safety Equipment		517,950	
HC/MC-130 Engine Upgrade		3,602,000	
HH-60G Communication and Avionics Upgrade		3,291,478	
Multiple Mission Design Series (MDS) Leak Detectors		819,342	
Special Tactics Dismounted Operators Suite		691,988	
Agile Combat Support			
C-130 Support Equipment		2,722,083	
Satellite Communication Radio Support Equipment		454,000	
Global Integrated ISR/Space Superiority/Cyberspace Superiority/C2/Incident Awareness and Assessment			
Cyber Modernization		1,589,000	
Control and Reporting Center Equipment		2,389,075	
Eagle Vision		16,973,236	
Remote Piloted Aircraft Squadron Operations Center (RSOC)		4,100,000	
RC-26B Modernization		200,000	
Communications			
Joint Incident Site Communications Capability (JISCC)		17,000,000	
Public Works and Engineering			
Potable Water Production and Prime Power		1,508,250	
Firefighting			
Fire Fighting Vehicles		8,157,376	
Urban Search and Rescue Kits		7,113,488	
Personal Protective Equipment Structural Firefighting		3,183,440	
Firefighting Support Kits		1,560,000	
Emergency Management			
Mobile Emergency Operations Center (MEOC)		7,535,778	
Common Operating Picture (COP)		4,399,200	
Liaison Command and Control Kit		830,027	
Mass Care			
Disaster Relief Bed-Down Sets (DRBS)		1,057,901	
Fatality Search and Rescue Team Equipment		3,568,936	
Religious Support Team (RST) Equipment		100,000	
Public Health			
Expeditionary Medical Support (EMEDS) Modernization		1,515,000	
Total	**$250,000,000**	**$315,000,000**	

1. Service FY 2013 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2013 will be provided in next year's NGRER.

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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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Airlift					
Airlift, C-5A	C-5A	-9	-3		
Electronic Warfare (EW)					
EW, RC-26B	RC-26B	-11			
Rescue					
Rescue, HH-60G	HH-60G		-5	-10	
Miscellaneous Equipment					
MQ-1B	MQ-1B	-8	-4		
MQ-9A	MQ-9A	+5	-5		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2010 Planned Transfers & Withdrawals							
Air Refueling							
Air Refueling, KC-135R	KC-135R	+5	0				
Airlift							
Airlift, C-130E	C-130E	-9	0				
Airlift, C-130H	C-130H	+3	+23				
Airlift, C-130J	C-130J	-2	0				
Airlift, WC-130H	WC-130H	+2	0				
Fighter							
Fighter, A/OA-10A	A/OA-10A	+18	-24				
Fighter, A/OA-10A	A/OA-10A	+0	+18				
Fighter, F-15A	F-15A	-3	-6				
Fighter, F-15C	F-15C	-11	-6				
Fighter, F-15D	F-15D	-1	0				
Fighter, F-16C	F-16C	-46	-75				
Fighter, F-16D	F-16D	-4	-5				
FY 2010 P-1R Equipment							
Modification of Aircraft							
A-10				$67,441,000	$135,226,000		
F-15				0	27,378,000		
F-16				68,666,000	72,903,700		
C-5				26,767,000	22,509,000		
C-17A				13,993,000	11,038,000		
C-130				60,230,000	40,178,000		
C-130J Mods				2,291,000	856,000		
C-135				64,729,000	66,995,000		
E-8				167,500,000	10,904,600		
H-60				1,458,000	11,223,000		
Aircraft Support Equipment & Facilities							
Aircraft Replacement Support Equipment				12,735,000	2,165,000		
Vehicular Equipment							
Passenger Carrying Vehicles				952,000	952,000		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Medium Tactical Vehicles				0	10,385,000		
Security and Tactical Vehicles				1,509,000	45,594,000		
Fire Fighting/Crash Rescue Vehicles				5,959,000	6,768,000		
Runway Snow Removal & Cleaning Equip				15,155,000	13,239,000		
Items Less Than $5M (Vehicles)				15,981,000	2,906,000		
Electronics & Telecommunications Equipment							
Intelligence Communications Equipment				6,190,000	12,600,000		
Air Traffic Control & Landing System				9,732,000	11,296,000		
Theater Air Control Sys Improvement				6,294,000	2,371,000		
Mobility Command and Control					524,000		
Weather Observation Forecast				1,200,000	0		
AF Global Command & Control System				1,842,000	1,842,000		
Theater Battle Management C2 System				200,000	802,000		
Air & Space Operations CTR-Wpn System				2,540,000	6,429,000		
Base Info Infrastructure				93,000,000	97,500,000		
NAVSTAR GPS				0	1,805,000		
MILSATCOM				0	19,611,000		
Tactical C-E Equipment				19,430,000	50,680,000		
Base Communications Infrastructure				33,814,000	32,622,000		
Night Vision Goggles				0	180,000		
Other Base Maintenance and Support Equipment							
Mechanized Material Handling Equipment				788,000	953,000		
Base Procured Equipment				1,214,000	669,000		
Items Less Than $5M (Base Support)				5,100,000	900,000		
FY 2010 Title III NGREA Equipment							
Mobile Aeromedical Staging Facility (MASF)						$1,245,000	$0
Aeromedical Evacuation Patient Movement Items						88,000	0
Weather Data Communication Equipment						200,000	151,026
Interoperable Medical Communications Suite						270,000	0
Mobile Full Motion Video Geospatial Intelligence Info Exploitation Packages						200,000	0
Mobile Full Motion Video Geospatial Intelligence Info Exploitation Packages Rover Vehicles						400,000	0
Air Defense Sector (ADS) Tactical Satellite Communications						1,800,000	0
Mass Field Feeding - Ultimate Mobile Airtronic Kitchen						3,750,000	3,900,000
Disaster Relief Bed-down Sets						6,600,000	2,904,456
Mobile Control Tower Vehicles						2,240,000	2,044,698
Mobile Command Post Trailers						3,215,000	3,500,000
Fatality Search and Recover Team (FSRT) Equipment and Vehicles						861,000	17,052,470
Tactical Medical Vehicles						500,000	0
Ambulance Bus						400,000	0

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Less than Lethal Crowd Control / Civil Disturbance Kits						2,480,000	2,750,000
Weapons of Mass Destruction/Installation Protection Units						2,006,000	2,247,852
Distributed Ground Station (DGS) Ground Receiver Equipment for RC-26 Incident Awareness and Assessment (IAA) Operations						2,750,000	0
Aeromedical Evacuation Inflight Kits						995,000	0
KC-135 Boom Operator Simulator System						1,350,000	4,392,906
C-5/C-17/C-130 Lookout Capability						3,000,000	0
C-5/C-17/C-130/KC-135 Defensive Systems						1,000,000	683,529
C-21 Avionics Upgrade						4,000,000	0
C-40 High Speed Data						500,000	0
C-40 Electronic Flight Bag						600,000	0
C-130/KC-135 Real Time Information in the Cockpit (RTIC)						9,600,000	0
C-130 ISO Stands							555,050
C-130 Loadmaster Seats						8,300,000	0
C-130/KC-135 Lighting						800,000	0
HC-130/MC-130 Sensor and Data Link Upgrades						2,000,000	407,381
LC-130 Propulsion Upgrade						2,700,000	0
LC-130 Crevasse Detection Radar						1,800,000	4,175,362
HH-60G Communications and Avionics Upgrade						1,500,000	0
A-10/F-15/F-16/HH-60 Helmet-mounted Cueing System						17,400,000	15,581,716
A-10/F-15/F-16 Communication Suite Upgrade						9,180,000	12,971,687
A-10/F-15/F-16 Defensive Systems Upgrades						4,600,000	7,860,740
A-10/F-15/F-16 Digital Radar Warning Receiver (RWR)						3,120,000	0
A-10/F-15/F-16 Digital Radio Frequency Memory (DRFM) Jammers						500,000	0
A-10/1F-16 Advanced Targeting Pods						2,000,000	1,999,489
A-10/HC-130/HH-60G LARS(V)12							3,300,000
F-15/F-16 Color Displays						8,030,000	0
F-15/F-16 Infrared Search and Track						1,000,000	0
F-15/RC-26/KC-135/A-10 Simulators							4,447,350
F-15/F-16 Avionics Upgrades							1,389,814
F-16 Advanced Interrogation Friend or Foe (AIFF)						800,000	0
JSTARS Low Cross Section Radar Detection Upgrades						500,000	0
JSTARS Avionics Upgrades							3,135,750
JSTARS Cooling Carts							1,815,300
Ballistic Missile Range Safety Technology						700,000	1,407,035
Cyber and Critical Infrastructure Range						1,700,000	2,178,520
Remotely Piloted Aircraft (RPA) Integrated Data Link						2,800,000	0
Remotely Piloted Aircraft (RPA) Improved Communication Suite						390,000	2,464,305

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
MQ·9 Reaper Mission Training Devices						185,000	494,958
RC-26 Avionics Modernization						3,045,000	165,545
RC-26 Adaptable Communications Suite						1,900,000	0
Senior Scout Radio Frequency Cancellation						3,900,000	1,250,000
Senior Scout Advanced Signals							5,040,000
Senior Scout High Frequency Direction Finding Equipment							4,500,000
Senior Scout Remote Operations							3,800,000
Pararescue / Special Tactics Training Suite						1,800,000	0
Pararescue Vehicles and Combat Survivability Suite						1,800,000	1,554,345
Special Tactics Survivability Suite						1,500,000	3,931,659
Security Forces Personnel Protective Equipment and Weapons						1,000,000	2,162,370
Firefighting Vehicles							8,762,356
ARCNet Gateways							22,332
Total				**$706,710,000**	**$722,004,300**	**$135,000,000**	**$135,000,000**

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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 2014 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

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Table 8

Significant Major Item Shortages

NOTE: This table provides 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	Large Aircraft Infrared Countermeasures (LAIRCM) for KC-135, C-130J, EC-130J	203	199	$1,884,422	$375,000,000	Allows tankers, combat delivery, and special operations aircraft to survive attacks from rapidly proliferating shoulder-launched missiles.
2	F-16/F-15/A-10 Radar Warning Receiver (RWR) and Defensive Systems Upgrades	437	435	$1,153,584	$501,809,134	Replaces 130 non-sustainable F-15 RWRs with a more capable system fully compatible with the AESA radar. Replaces A-10 and F-16 block 30/32/42 legacy ALR-69 RWR that has overloaded processors that do not provide adequate response time or threat detection with new fully digital ALR-69A. Increases flare capacity on F-16 aircraft and provides pre-emptive flare capability for F-15C. Adds missile warning on F-16 aircraft. Adds ALQ-213 to F-16 Block 42 to integrate the aircraft electronic warfare and countermeasures systems.
3	KC-135 Real Time Information in Cockpit (RTIC) Data Link and Communications	180	180	$750,000	$135,000,000	Provides secure line-of-sight and beyond line-of-sight radios and data link to enable KC-135 aircrews to participate in network-centric operations. Provides continuous positions of friendly and hostile forces to expedite mission execution. Enables rapid re-tasking of aircraft to maximize efficiency of refueling operations.
4	F-15/F-16 Sensor Upgrades	550	273	$728,619	$198,913,000	F-15 APG-63(V)3 replaces mechanically scanned radars with an active electronically scanned array (AESA) radar, which provides detection and tracking in multiple directions simultaneously and enables tracking of small asymmetric targets. The F-16 Block 40/42 Advanced Identification, Friend or Foe (AIFF) rapidly finds tracks of interest in saturated Federal Aviation Administration (FAA) airspace on homeland defense alert missions. Targeting pods require digital video output to display the full capability of the latest fourth generation FLIR and TV sensors to help determine potential enemy intent and minimize collateral damage and civilian casualties. Additional targeting pods are needed to maximize training efficiency.
5	HH-60 Situational Awareness Upgrade Kits	18	18	$4,160,888	$74,896,000	Hostile Fire Indicator provides aircrew warning and direction of small arms and RPG fire. Helmet-mounted Cueing System and Point Designation provide the crew flight and survivor awareness. New radios enable communication with multiple agencies during domestic response.

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Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
6	Battlefield Airman Combat Equipment	1,019	453	$202,207	$91,600,000	Battlefield Airman includes Security Forces, Guardian Angels, Special Tactics, and Terminal Air Controllers. The items required include communication equipment, situational awareness equipment, personal protective equipment, night vision devices, weapons and weapons accessories, training devices, and explosive detection equipment.
7	A-10 Situation Awareness Upgrade Kits	42	42	$554,286	$23,280,000	Color display unit allows displays full digital resolution of latest fourth generation targeting pod sensors to improve target identification and minimize collateral damage and civilian casualties. 3D audio reduces extraneous noise and radically increases the pilot's ability to process information coming simultaneously from multiple radios and threat warning systems. Anti-jam navigation system prevents sensor cueing errors in GPS jamming environment.
8	HC/MC/LC-130 Communication Navigation Surveillance Air Traffic Management (CNS/ATM) Upgrade	19	19	$5,052,632	$96,000,000	CNS/ATM compliance by 2015 provides precision navigation, civil data link, enhanced surveillance and addresses obsolescence issues.
9	Domestic Disaster Response Equipment	4,453	1,040	$126,731	$131,800,000	Many units are not equipped or have substandard equipment required to perform their Emergency Support Function (ESF)-based missions when responding to natural and manmade disasters to include, but not limited to, firefighting vehicles, Disaster Relief Bed Down Sets and Kitchens, Joint Incident Site Communication Capability, Mobile Emergency Operations Centers, Explosive Ordnance Disposal equipment, Prime Power Generators, and Incident Analysis and Assessment systems.
10	Advanced Simulators for F-16, C-130H/J, KC-135	31	25	$3,860,000	$96,500,000	With reduced flying hours and range limitations, ANG flying units will be unable to maintain full combat readiness without high fidelity tactical simulators.

III. Air Force Reserve Overview

A. Current Status of the Air Force Reserve

1. General Overview

Top AFR Equipping Challenges

- **Defensive Systems:** Increased aircraft vulnerability/survivability risk during combat operations due to a de-emphasis of legacy defensive systems modernization
- **Data Link and Secure Communications:** Non-standard airborne capabilities supporting image/video, threat updates, and SLOS/BLOS communications for combat missions
- **Acquisition Execution:** Ever-increasing acquisition timelines on AFR programs resulting from several challenges: policies, over regulation, and under-resourced requirements affecting procurement planning, and multi-year execution standards

The Air Force Reserve (AFR) provides the Nation a surge capacity in times of national crisis as both a strategic reserve and as one relied upon for daily mission accomplishment. The AFR is fully engaged across the full spectrum of operations with its share of Total Air Force contingency requirements rising from 6 percent to 9 percent since 2008 supporting Operations Noble Eagle, Enduring Freedom, Odyssey Dawn, Unified Protector, New Dawn, and Tomadachi. As of July 2012, this amounted to more than 2,600 Reservists mobilized or deployed, representing 9.4 percent of Total Air Force requirements. These requirements also included tasks such as the Presidential and VIP support by AFR explosive ordnance disposal (EOD) technicians. The overall rising trend is expected to continue through 2015.

In February 2012, the CSAF issued a document called: *Air Force Priorities for a New Strategy with Constrained Budgets*. This document explains that 1) the Active and Reserve Components were carefully balanced to preserve both readiness and capability in the FY 2013 budget submission, and 2) a modern force is necessary to meet future challenges. With the pace and scope of modernization slowing, the AFR will rely on NGREA to play an increased role in preserving the operational force and strategic reserve that the Air Force needs.

Recent mobilizations demonstrate surge capacity in times of national crisis, such as the AFR wildfire emergency response near Colorado Springs, CO. MAFFS C-130 aircraft responded to National Interagency Fire Center requests, while Emergency Preparedness Liaison Officers assisted with coordinating response efforts between state, federal, and other civil agencies.

Every day, AFR Airmen provide operational support to the Air Force with approximately 10 percent of its Airmen on full-time duty (full-time support [FTS], mobilizations, deployments, and active duty operational support [ADOS]). Many others provide their expertise on a “part-time” basis (inactive duty training [IDT], annual training [AT], active duty for training [ADT]). Some examples include: aircrew accomplishing test flights for post depot maintenance checks; logisticians operating the aerial port of embarkation (APOE) processing functions for joint regional customers such as U.S. Marine Expeditionary Force units; FTS and Selected Reserve (SELRES) aviators serving as instructors for 19 percent of the training sorties flown in the aviation pipeline; and the intelligence and Remotely Piloted Aircraft (RPA) community flying 9 percent of RPA orbits providing key global ISR support. Ideally suited to take on periodic and predictable work, this ready and accessible force of skilled Airmen provides capabilities on a continual basis. In the case of SELRES Airmen, when their work is done, they return to their civilian employers and

come off the Air Force payroll. AFR Airmen are both a highly-skilled and cost-effective workforce.

NGREA utilization meets AF strategic reserve needs by modernizing the AFR's aging equipment to maintain leading-edge combat capability. The appropriation bolsters recapitalization of critical RC equipment in the three major areas within which the AFR accomplishes modernization planning: Agile Combat Support (ACS), Combat Air Forces (CAF), and Mobility Air Forces (MAF). For instance, FY 2012 execution enabled ACS procurement of materials handling equipment used to support APOE operations at March Air Reserve Base (ARB). CAF procurement programs executed FY 2012 NGREA for A-10 Lightweight Airborne Recovery Systems (LARS) that assist in theater combat rescue operations. Planned FY 2012 NGREA for MAF programs supports modernization efforts, such as the multi-year C-130 Mobile Aerial Spray Systems. In FY 2011, AFR executed NGREA funding to equip ACS, CAF, and MAF with aviation modernization upgrades, vehicular and civil engineer equipment, security forces tactical equipment, Combat Search and Rescue (CSAR) Common Data Link equipment, and allowance standard equipment. Air Force Reserve Command (AFRC) has the unique responsibility to manage WC-130J aircraft as the lead command. This translates to executing all modernization and sustainment functions of peculiar weather equipment to accomplish the Hurricane Hunter mission. For example, prior year NGREA funds are on contract for civil satellite communications modernization and to mitigate obsolescence of the Aerial Reconnaissance Weather Officer system.

The AFR maintains a warfighter-driven Requirements Process beginning with Numbered Air Forces that conduct Combat Planning Councils to study mission needs and solicit, validate, and prioritize requirements proposals. The AFRC Corporate Structure then ranks these results into the Prioritized Integrated Requirements List (PIRL) and presents the list to the AFRC Commander for approval. The PIRL executable items then form the AFR Modernization list, which is used to determine AFR's FY Procurement List.

New to the requirements and modernization process is an out-year projection of the AFR's procurement plan. This new approach assists Air Force Materiel Command (AFMC) in planning acquisition workload and contracting strategy. The nature of the NGREA appropriation demands an agile response by the acquisition community. The AFR is actively presenting three to five year procurement plans to AFMC using courses of action that depict multiple funding scenarios. At the FY 2013 President's Budget levels, $75 M per year addresses the executable portion of the $1.8B in modernization requirements.

The AFR is working to address Congressional concerns with NGREA obligation rates that do not meet DoD goals. The AFRC/A5R Requirements Division, re-established in March 2011, provides additional active oversight of NGREA program execution in addition to expanded NGREA planning horizons used to facilitate AFMC budgeting for manpower and travel costs. The longer planning horizons allow earlier initiation of requirements documents to ensure lead command requirement approval prior to allocation of NGREA. The AFR is also working with AFMC to ensure that acquisition planning is in place prior to the receipt of funds so that Requests for Proposal can be issued. Contractual options or other contractual vehicles allowing for flexible order quantities will be put in place, where possible. While these planning improvements will take several years to be fully implemented, improvements are already visible in AFR NGREA execution rates.

a. Agile Combat Support (ACS)

Agile Combat Support, as an AF core function, supports and enables all other AF core functions. The AFR provides a significant portion of that deployable combat support capability to the AF. This includes

- 26 percent of the AF's EOD capability,
- 17 percent of the AF's Prime Base Engineer Emergency Force (Prime BEEF) civil engineer capability,
- 27 percent of the AF's RED HORSE heavy construction capability, and
- 20 percent of the AF's Security Forces capability.

Multi-year NGREA purchases of weapons and night vision equipment since FY 2010, including $6.5M across FY 2011 and FY 2012, support the mobilization of security forces SELRES to relieve high Active Component (AC) dwell rates.

ACS vehicle procurement cross-cuts with CAF and MAF modernization that directly supports RC contribution to AF missions. Other AF priorities increased pressure on the vehicle replacement account with FY 2012 and FY 2013 cuts affecting all components. At the beginning of FY 2012, the AFR vehicle fleet was older than the AF fleet in five categories: passenger vehicles, cargo carriers, materials handling equipment, runway clearing, and construction equipment. Several efforts between AFR and then-named Warner Robins Air Logistics Center (WR-ALC) partially mitigated the effects of fleet age and shortfalls. These effects include authorization reductions, transfers, and $10.4M of FY 2011 and FY 2010 AC fallout. However, the total AFR vehicle procurement shortfall remains $8.1M as of July 2012.

Also a cross-cutter program, AFR support equipment has a current shortfall of approximately $115M for support equipment sustainment across all functional areas within the command. Assets required for procurement include such items as maintenance stands, avionics test stations, tow bars, radios, small arms, and night vision devices. Support equipment fill rates and readiness will remain on par with the AC and achieve the reset to the new strategy, defined in *Sustaining Global Leadership: Priorities for the 21st Century Defense*, given a sustained baseline. Recent efforts to improve execution of the AFR's buy list with the WR-ALC resulted in procurement of water jet cutters. Strategic airlift units no longer have to wait for contractors or depots to manufacture parts, saving Operations and Maintenance funds and improving aircraft availability of C-5 and C-17 aircraft.

b. Combat Air Forces (CAF)

AFR Guardian Angel, HH-60 and HC-130 rescue assets, A-10, and F-16 fighter squadrons deployed to the Horn of Africa and Afghanistan during the past year. The AFR uses NGREA to keep aircraft and equipment up to date and allow RC units to integrate seamlessly with the AC.

The AFR deployed 12 aircraft to Korea for 120 days. Current modernization efforts that support this capability include an avionics update with a new smart display, helmet-mounted targeting, and advanced identification of friend or foe. For AFR F-16s, the most critical requirement is

radar enhancement. The current APG-68 radar is becoming unreliable and averages $136K a year for each aircraft in repair costs. A new radar processor will improve reliability and performance with minimal integration, installment, and purchasing costs. An updated processor is estimated to save over $100K per year for radar repair on each F-16.

AFR A-10 units from Barksdale AFB, LA, and Whiteman AFB, MO, deployed to Afghanistan in the spring of 2012 to fill a mix of 90 and 180-day deployments to support an Air and Space Expeditionary Force (AEF) rotation. This deployment was the first use of the NGREA-purchased 4th generation LITENING targeting pod. The new LITENING pod proved to be a tactical and technological success. AFR A-10s are receiving a helmet-mounted targeting display and an onboard oxygen generation system to help them operate from austere locations. The number one critical requirement for AFR A-10s is electronic warfare suite and cockpit avionics modernization. The Air Force has partially funded new wings for the A-10 fleet; however, new wings are required for all aircraft.

The 307th Bomb Wing operates the B-52H Stratofortress and provides 100 percent of the formal training for B-52 aircrew combat employment. The number one critical requirement for the 93rd Bomb Squadron is a fully operational, multi-channel audio/video mission data recording system to effectively accomplish its Formal Training Unit mission.

AFR volunteers and mobilized Airmen deployed to fill a four-month AEF rotation to support operations in the Horn of Africa using the HC-130N/P, flying 69 missions totaling 215 hours. AFR HC-130s are receiving the ALQ-213 to integrate their defensive electronic warfare suite. The number one critical requirement for the HC-130 is a hostile fire indication system and a secure common data link with all of the combat search and rescue assets. These systems, combined with the in-progress Defensive Systems Suite Integration program, should allow aging legacy systems to maintain the combat capabilities required by combatant commanders while the AFR prepares to receive the HC-130J recapitalized aircraft in the near future.

AFR HH-60G Pave Hawk search and rescue helicopters have had three to four aircraft continually deployed to Afghanistan from May 2011 to June 2012. During this time, volunteer and mobilized AFR crews and maintainers launched over 2,400 sorties logging 1,500 hours. During this period, they were credited with over 800 saves and 860 assists. In recent years, AFR HH-60s have received avionics upgrades with new display and data link capability. Number one on the critical requirement list is a hostile fire indication system for self-protection and a rotor brake system for safety. Most HH-60G aircraft will reach airframe life limits by 2019. Many airframes already bear the scars of overuse, such as structural cracks and combat damage. Replacement program delays for this important low density/high demand asset make the lifetime limit problem even more critical. Near-term replacement is key to maintaining this important capability.

The AFR Guardian Angel (GA) weapon system consists of Airmen who are pararescue, survival, resistance, and escape specialists. FY 2011 NGREA recently funded the lightweight, secure, data link system. This was the number one critical requirement for the AFR GA to enhance command and control in addition to situational awareness. Plans are underway to continually upgrade this recently purchased tactical communication equipment, to include data link with video down-link capability. AFR GA units now require training equipment, such as water rescue crafts for use in extreme climates during intensive training and contingency operations. Other ongoing programs

that require NGREA funds include GA equipment modernization such as short-wave infrared night vision devices, weapons accessories, communication equipment, and personal protective equipment. As a dynamic mission, GA tactics and capabilities requirements constantly change with the operational environment. Combatant commanders continually ask for upgrades and additional capability, such as air-deliverable vehicles, tactical recovery vehicles, and flexible weapons options to include less-than-lethal weapons.

c. Mobility Air Forces (MAF)

The majority of AFR capability exists in the MAF. The AFR provides a significant contribution of the MAF aircrew forces in diverse mission areas. AFR aircrews play a vital part in missions at operational units, under the Total Force Integration (TFI) construct, unit equipped, classic association and active association, and at Formal Training Units to include 18 percent of aerial refueling, 18 percent of the tactical airlift, 30 percent of the strategic airlift, 100 percent of the AF aerial spray, and 100 percent of the AF Weather Reconnaissance.

The AFR's MAF forces provide the highest levels of force readiness while providing the required capabilities to the warfighter. Currently, AFR provides forces that support both unit equipped and TFI units for C-5, C-17, C-130, KC-10, KC-135, and C-40C aircraft. Modernization of mobility aircraft is required to maintain or reverse degraded capabilities due to materiel age or obsolescence. Programs like the C-5 AMP, C-5 RERP, and the C-17 Block 18 baseline configurations programs increase operational and maintenance capability while fulfilling mandated airspace requirements. The C-130 CNS/ATM program provides requirements to meet the FAA's CNS/ATM mandates for airspace access beyond 2020.

TFI associate units at 302nd Airlift Wing, Peterson AFB, 440th Airlift Wing, Pope AFB, and the 403rd Wing at Keesler AFB have maintained a continuous presence throughout the year at locations within the United States Central Command AOR. AFR aircraft are being equipped with the RTIC data link system to provide crews with advanced situational awareness and the ability to be dynamically mission re-tasked. This NGREA-funded capability was identified as an Urgent Operational Need (UON) and has parallel efforts to provide like capability for C-17s and C-130Js.

The 910th Airlift Wing at Youngstown Air Reserve Station (ARS), OH is tasked as the only large area fixed-wing aerial spray capability within DoD to control disease-carrying insects, pest insects, and oil spill dispersement. The unit has been involved in year round coverage to suppress mosquitoes carrying the West Nile Virus. The C-130 Modular Aerial Spray System (MASS) is over 20 years old and becoming unsustainable. A program has been initiated, utilizing NGREA funds, to design and procure a replacement MASS to improve system reliability and spray accuracy.

The 53rd Weather Reconnaissance Squadron at Keesler AFB provides ongoing Hurricane Hunter support to National Hurricane Hunter and National Winter Storm operation plans. The unique mission profiles flown by the WC-130Js have revealed a critical communication capability shortfall. The satellite phone solution, identified by a team from the AFR and WR-ALC, will resolve the communication shortfall and enhance the capability and safety of flight for this national weather reconnaissance capability.

AFR KC-135s aircrews have continuously maintained a 1:5 mobilization to dwell ratio to support AEF rotations since January 2009. The KC-135 is programmed to receive avionics airspace compliance upgrades but still possesses no capability for BLOS secure data/voice communication or self-defense capabilities. The AFR identified these as critical requirements shortfalls for the KC-135.

Additionally, several other enhancements have been initiated: procurement of C-130 Surface-to-Air Fire (SAFIRE) tactical lookout, C-130 loadmaster crashworthy seats, HC-130 defensive systems integration, and installation of C-5 ADS. Additionally, the MASS was initiated. Many of these efforts directly address capability shortfalls identified by theater combatant commanders during combat operations.

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 Current Equipment

As the average age of aircraft increases, there is a direct correlation to a demand for more Operations and Maintenance funding to preserve the capability. The following factors drive this increased funding demand: 1) disappearing vendors, as a result of industry shifts to newer aircraft, create a greater cost for replacement parts as items exceed their projected life cycle, 2) operational costs of these less-efficient aircraft drive up flying hour costs, and 3) mean-time-between-failure worsens as aircraft age. These factors combine to increase the maintenance burden and simultaneously decrease 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 2013.

c. Compatibility of Current Equipment with AC

Air Force Reserve equipment requires compatibility with the AC to support applicable AF missions with the exception of “unique” missions performed by the AFR (e.g., weather, aerial spray, and firefighting). Equipment compatibility with the AC is also critical to ensuring the SELRES has the ability to train to AC standards. Modernized equipment ensures SELRES readiness to operate with AC counterparts. With Congressional funding received to-date, the AFR is able to keep its mission equipment compatible with the AC.

d. Maintenance Issues

i. Maintenance Impact of Continuing Resolutions (CRs) in Execution Year

Timely appropriations and authorizations are needed to reduce risk in AFR depot maintenance programs. Weapons Systems Sustainment executes to a predetermined schedule that is based on enterprise requirements. The schedule flow includes commitment of funds 30 days prior to equipment input that enables depot organizations to order parts. However, the uncertainty of obligation authority due to CRs severely disrupts this process, as was the case in FY 2011. In this instance, two aircraft scheduled to begin in March 2011 input (a C-5 and a C-130) required

$38.5M in late February. Delays in CRs or actual appropriations cause a ripple effect due to lack of sufficient annual authority. Flying units ultimately suffer for aircraft availability as funding delays result in depot delays.

ii. A-10 Maintenance Issues

Last year's NGRER introduced the Air Force's A-10 wing replacement program to replace thin-skinned wings. The System Program Office encountered technical and quality issues with legacy wing production and worked to correct the underlying problems. While work remains on maturing processes, parts, and technical data, the consistent delivery of legacy and new wings is sustaining depot production.

e. Modernization Programs and Shortfalls

The AFR's list of modernization shortfalls stresses aircraft defense, safety, and data link communications. The requirements identified in *Table 8* are shortfalls identified through the AFR corporate process and the AFR FY 2014 Equipment Modernization List.

B. Changes since the Last NGRER

The force structure changes announced with the FY 2013 President's Budget include Air Force plans to retire 82 AFR aircraft in the next few years in AL, AR, CA, GA, LA, MA, MN, MS, NY, NC, OH, OK, PA, and TX. This action reduces the AFR inventory by 61 airlift and aerial-refueling aircraft, as well as 21 fighter jets. This will retire the AF's oldest aircraft, make room for newer models, and consolidate similar types of aircraft at common locations as much as possible. Additionally, some aircraft transfers for FY 2012 and later are on hold pending outcome of the FY 2013 President's Budget.

Changes in the states of AFR equipment programs include

- FY 2012 excavator and trencher purchases enabled the Expeditionary Combat Support Training and Certification Center to hone SELRES wartime civil engineer qualifications.

- FY 2012 purchases of fire trucks and F450 pickup trucks ready the force with fire suppression capability and support RED HORSE open-the-base missions—critical to missions such as establishing bare bases.

- FY 2012 Information Technology (IT)-related funding enabled the initial enterprise implementation of a voice over Internet protocol (VOIP) strategy to ensure continued telephone capabilities at AFR host bases and provide a migration path for compliance with the AF 2017 mandate to move everything over to Internet protocol (IP). These funds were also used to install a trunked Land Mobile Radio infrastructure system and Giant Voice system at Niagara Falls ARS and a fiber optic cable plant at Homestead ARB to enhance mission performance.

- A-10/F-16 Block 30 HMIT has entered production. AFR A-10 HMIT installs are projected to start in December 2012. AFR F-16 installs are projected to start January 2013. All HMIT installs are projected to be complete by May 2014.

- F-16 Center Display Unit (CDU) places a smart color multi-function display on the center pedestal. The CDU will reduce maintenance and significantly increase aircraft processing capacity. Depot installs to begin January 2013.

- F-16 Software Capability Upgrade 8.0 (SCU 8) will be ready for fleet-wide install in February 2013. In addition to incorporating HMIT and CDU functionality, SCU 8 also brings LITENING Gen-4 and Advanced Targeting Pod capability, digital Ethernet connectivity, Advanced Medium-range Air-to-air Missile (AMRAAM) D and AIM-9X digital integration, and many other refinements to the aircraft operational flight program.

- F-16 Multi-task Trainer simulators at Homestead ARB and Carswell Joint Reserve Base are each scheduled to receive two updated simulators to include 360-degree visual systems by the second quarter of FY 2013. Additionally, the simulators are planned to have SCU 8 modifications to include HMIT and CDU upgrades.

- A-10 Operational Flight Program Suite 7.b begins install on AFR aircraft in December 2012. In addition to the HMIT, Suite 7.b significantly increases search and rescue capability with the install of the LARS v12, and provides LITENING Gen-4 and Advanced Targeting Pod capabilities. While at the depot, the obsolete Pave Penny system will be removed to open up space in the avionics bay, reduce aircraft drag, and save money and time by eliminating future system maintenance.

- Install of the second ARC-210 radio, allowing simultaneous SLOS and BLOS communications, has been completed in AFR A-10s.

- C-130 Night Vision Imaging System windscreens installation has been completed on all AFR C-130H2 aircraft. The new windscreens optimize the aircrew's capabilities with night vision goggles. The windscreens will aid in providing a sharper image and enhanced detection of objects illuminated by infrared light. Cockpits are now compliant with AF policy directives prescribing that all aircraft systems will be night-vision-device compliant.

- All of AFR's C-130H2/H3 aircraft have been modified with LAIRCM capability. LAIRCM will provide aircrew/aircraft with advanced protection for the aircraft from the threat of infrared-seeking surface-to-air missiles. This fulfills one of AFR's most critical aircrew/aircraft survivability requirements.

- APN-241 radar installations have been completed on AFR's legacy C-130 fleet. This installation will provide our legacy fleet (C-130H1/2/2.5/3) with the capability to make autonomous airdrops in adverse weather conditions and accomplish formation airdrops in weather. The APN-241 also provides a significant increase in mean time between failures over the system it replaced.

- C-130 RTIC modification has been completed on 10 of AFR's C-130 aircraft. RTIC has been utilized to resolve a UON request to provide SLOS and BLOS capability to the combatant commander. RTIC provides crews enhanced situational awareness capability during airlift, airdrop, and other operations.

- All AFR C-130 aircraft have been modified with a Yoke Mounted Expendable Switch. The switch allows crews to immediately respond to threat indications and callouts. The yoke mounted expendables dispenser switch provides an increased capability and covers a gap during specific phases of flight to counter and defeat threats most often faced by a deployed crew.

- All AFR C-5A aircraft have been modified with AAR/ALE-47 aircraft defensive systems. Defensive system modification allows C-5As to remain relevant to combatant commanders by accessing airfields restricted for aircraft with self-defense capabilities.

C. Future Years Program (FY 2014–FY 2016)

1. FY 2016 Equipment Requirements

Table 1 provides projected FY 2014–FY 2016 major equipment inventories and requirements.

2. Anticipated New Equipment Procurements

Table 3 lists planned procurements for the AFR from the FY 2014 President's Budget.

Table 4 provides AFR-planned NGREA procurements for FY 2011–FY 2013. This includes the FY 2012 list that was not available at the time of publication for last year's NGRER.

3. Anticipated Transfers from AC to RC

No AFR transfers are programmed in the FY 2013 President's Budget.

4. Anticipated Withdrawals from RC Inventory

Table 5 also lists major RC equipment to be withdrawn or transferred, including the force structure changes discussed in Section II, paragraph B of this chapter.

5. Equipment Shortages and Modernization Shortfalls at the End of FY 2016

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

D. Summary

Effective, selective modernization is the key to not only maintaining the ability to meet contingency taskings, but also improving the capability of the warfighter. This becomes more important as budget considerations drive new systems acquisition further into the future, resulting in the demand to upgrade and sustain our legacy systems. The AFR receives its modernization funding through two primary sources: the Air Force Budget and NGREA, the life-blood of which is NGREA funding. The AFR continues to focus on increased capability to the warfighter through modernization. Those capabilities are self-defense, real-time communications/data link, and greater precision/target identification and engagement. Commercial off-the-shelf products continue to allow major improvements in SLOS/BLOS and data link communications, advanced digital/analog secure video data link to ground forces, and improved weapons capability in the F-16, A-10C, HH-60, HC-130, and B-52. The AFR has significantly enhanced combat capabilities of both strategic and tactical airlift, to include CSAR

platforms, with C-130/HC-130 LAIRCM, improved all-weather situational awareness, C-130 APN-241 radar, and improved the C-17A airlift capability with palletized seats.

As stated last year, the AFR is making progress on several enhancements: SLOS/BLOS on all AFR fighters, permanent tactical data links for AFR CSAR assets, fourth-generation LITENING ATP sensors, and improved targeting capabilities on AFR A-10C/F-16/B-52 platforms.

In summary, AFR is committed to improving its execution of NGREA funds to accelerate needed capabilities to our Airmen. We continue our focus on improving defensive systems and communication capabilities without neglecting other modernization requirements. We continue to work with our partner commands, particularly ACC and AMC, to ensure requirements are fully defined prior to allocation of AFR NGREA funds and are working closely with AFMC to improve acquisition planning. Although more work remains to be completed, improved planning and communication are already bearing fruit in improved NGREA obligation rates on AFR programs.

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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. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Air Refueling							
Air Refueling, KC-135R	KC-135R	$74,000,000	62	62	65	69	69
Air Support							
Air Support, MC-130E	MC-130E	$93,000,000	5	5	0	0	0
Weather, WC-130J	WC-130J	$73,800,000	10	10	10	10	10
Airlift							
Airlift, C-130H	C-130H	$39,600,000	51	51	51	51	51
Airlift, C-130J	C-130J	$73,800,000	10	10	10	10	10
Airlift, C-17A	C-17A	$281,200,000	18	18	18	18	18
Airlift, C-5A	C-5A	$205,100,000	8	6	0	0	0
Airlift, C-5B	C-5B	$235,300,000	16	16	6	0	0
Airlift, C-5M	C-5M	$328,000,000	0	0	10	16	16
Airlift, C-40C	C-40C	$80,700,000	4	4	4	4	4
Airlift, WC-130H	WC-130H	$60,000,000	2	2	2	2	2
Bomber							
Bomber, B-52H	B-52H	$99,000,000	18	18	18	18	18
Fighter							
Fighter, A-10C	A-010C	$13,500,000	27	27	27	27	27
Fighter, F-16C	F-16C	$21,600,000	49	49	49	49	49
Fighter, F-16D	F-16D	$21,000,000	3	3	3	3	3
Rescue							
Rescue, HC-130N	HC-130N	$23,000,000	1	1	1	1	1
Rescue, HC-130P	HC-130P	$23,000,000	4	4	4	4	4
Rescue, HH-60G	HH-60G	$27,000,000	15	15	16	16	16

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Equip No.	Average Age	Remarks
Air Refueling			
Air Refueling, KC-135R	KC-135R	53	
Air Support			
Special Ops, MC-130E	MC-130E	49	
Weather, WC-130J	WC-130J	16	
Airlift			
Airlift, C-130H	C-130H	24	
Airlift, C-130J	C-130J	11	
Airlift, C-17A	C-17A	13	
Airlift, C-5A	C-5A	43	
Airlift, C-5B	C-5B	27	
Airlift, C-40C	C-40C	8	
Bomber			
Bomber, B-52H	B-52H	53	
Fighter			
Fighter, A-10A	A-010A	34	
Fighter, F-16C	F-16C	27	
Fighter, F-16D	F-16D	27	
Rescue			
Rescue, HC-130N	HC-130N	44	
Rescue, HC-130P	HC-130P	49	
Rescue, HH-60G	HH-60G	23	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of equipment programmed to be procured with Service procurement funds as identified in the P-1R exhibit of the FY 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016
Modification of Inservice Aircraft			
B-52	$1,393,000	$5,289,000	$931,000
A-10	4,842,000		
F-16	24,000		
C-5M	700,614,000	264,463,000	
C-17A	7,653,000	27,933,000	
C-130	18,934,000	3,821,000	7,278,000
C-135	5,239,000	7,977,000	8,132,000
H-60	5,110,000	6,645,000	1,536,000
Aircraft Replacement Support Equipment	384,000		
Vehicular Equipment			
Passenger Carrying Vehicles	69,000		
Medium Tactical Vehicles	833,000		
Security and Tactical Vehicles	100,000		
Runway Snow Removal & Cleaning Equipment	219,000		
Electronics and Telecommunications Equipment			
Air Traffic Control & Landing System	1,091,000		
Theater Battle Management C2 System	145,000		
Air & Space Operations Center - Weapon System	2,000,000		
Information Transport Systems	2,657,000		
Tactical C-E Equipment	528,000		
Base Communications Infrastructure	357,000		
Communications & Electronics Modifications	1,501,000		
Other Base Maintenance and Support Equipment			
Night Vision Goggles	150,000		
Base Procured Equipment	300,000		
Total	**$754,143,000**	**$316,128,000**	**$17,877,000**

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013
FY 2011 Title IX NGREA Equipment			
C-130 Large Aircraft Infrared Countermeasures (LAIRCM)	$22,890,723		
Combat Search and Rescue (CSAR) Common Data Link (Microlite) (Guardian Angels)	6,368,000		
F-16 2nd ARC-210 & Digital 3D Audio	6,295,000		
A-10/F-16 Helmet-mounted Integrated Targeting (HMIT)	6,250,508		
HC-130 Integrated Electronic Warfare Suite (ALQ-213) with Visual Electronic Training System (VECTS)	5,782,985		
A-10/F-16 Center Display Unit	4,100,000		
Vehicles	4,022,015		
C-130 Secure Line of Sight (SLOS)/Beyond Line of Sight (BLOS)	3,542,182		
C-130 Modular Armor	3,000,000		
Security Forces Weapons & Tactical Equipment	2,195,874		
Support Equipment	2,020,000		
Tactical Communication Headset (Guardian Angels)	811,860		
R-12 Refuelers	769,854		
Wireless Intercom (Guardian Angels)	486,000		
Simulators	450,000		
C-17 Palletized Seats	426,000		
LITENING Advanced Targeting Pod (ATP) Procurement & Spiral Upgrade	325,000		
HH-60 Smart Multi-Function Color Display (SMFCD)/Situational Awareness Data Link (SADL)	264,000		
FY 2012 Title IX NGREA Equipment			
F-16 Advanced Identify Friend/Foe (IFF)		$13,630,000	
Chief Information Officer (CIO) Board Project List		10,495,982	
C-130 Electronic Propeller Control System (EPCS)		8,202,966	
C-130 Modular Airborne Spray System (MASS)		8,000,000	
C-40 High Speed Data		6,880,538	
A-10 On Board Oxygen Generating System (OBOGS)		5,100,000	
C-130 Secure Line-of-Sight/Beyond Line-of-Sight (SLOS/BLOS) capability		4,811,045	
A-10 Lightweight Airborne Recovery System (LARS) V12		4,200,000	
A-10/F-16 Cockpit Modernization (Includes A-10/F-16 Center Display)		3,400,000	
Vehicles		3,028,467	
A-10/F-16 Day/Night Helmet Mounted Integrated Targeting (HIMIT)		1,981,973	
C-17 C-130 Interphone for Loadmaster/Scanner		1,678,719	
Support Equipment		1,604,555	
F-16 Commercial Fire Control Computer (CFCC)		1,485,755	

Table 4

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2011	FY 2012	FY 2013
C-130 Virtual Electronic Combat Training System (VECTS)		500,000	
Total	**$70,000,000**	**$75,000,000**	

1. Service FY 2013 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2013 will be provided in next year's NGRER.

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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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks
Air Refueling					
Air Refueling, KC-135R	KC-135R		+3	+4	
Air Support					
Air Support, MC-130E	MC-130E		-5		
Airlift					
Airlift, C-5A	C-5A	-2	-6		Aircraft retirements
Airlift, C-5B	C-5B		-10	-6	Conversions to C-5M model
Airlift, C-5M	C-5M		+10	+6	Conversions from C-5B model
Rescue					
Rescue, HH-60G	HH-60G		+1		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2010 Planned Transfers & Withdrawals							
Airlift, C-9C	C-9C	-3	-3				
Bomber, B-52H	B-52H	+8	+9				
FY 2010 P-1R Equipment							
Modification of Aircraft							
B-52				$6,953,000	$7,496,000		
A-10				65,373,000	66,405,000		
F-16				6,933,000	5,921,000		
C-5				13,478,000	30,657,000		
C-17A				13,829,000	0		
C-130				37,232,000	11,610,000		
C-130J Mods				1,697,000	685,000		
C-135				32,505,000	17,509,000		
H-60				1,440,000	3,911,000		
Aircraft Support Equipment & Facilities							
Aircraft Replacement Support Equipment				0	13,805,000		
Vehicular Equipment							
Passenger Carrying Vehicles				1,062,000	0		
Medium Tactical Vehicle				2,932,000	2,493,000		
Security and Tactical Vehicles				723,000	1,343,000		
Fire Fighting/Crash Rescue Vehicles				1,989,000	1,392,000		
Runway Snow Removal & Cleaning Equipment				5,024,000	1,042,000		
Items Under $5M (Vehicles)				5,908,000	0		
Electronics & Telecommunications Equipment							
Air Traffic Control & Landing System				0	146,000		
National Airspace System				1,920,000	4,374,000		
AF Global Command & Control System				628,000	627,000		
Mobility Command and Control				1,040,000	1,052,000		
Combat Training Ranges				0	800,000		
Theater Battle Mgt C2 System				200,000	350,000		
Air & Space Operations CTR-Wpn System				3,810,000	3,393,000		
NAVSTAR GPS				0	154,000		
MILSATCOM				0	2,080,000		
Tactical C-E Equipment				10,533,000	5,950,000		

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Base Comm Infrastructure				333,000	3,890,000		
Other Base Maintenance & Support Equipment							
Night Vision Goggles				226,000	302,000		
FY 2010 NGREA Title III Equipment							
A-10 Simultaneous SLOS/BLOS						$2,343,000	$2,338,267
A-10/F-16 Helmet-mounted Integrated Targeting (HMIT)						4,500,000	9,111,388
A-10/F-16 Advanced Targeting Pod (ATP) Procurement & Spiral Upgrade						1,800,000	1,714,585
B-52 Mission Data Recording System						3,200,000	0
C-17 Palletized Seats						1,800,000	1,493,091
C-130 SLOS/BLOS						7,500,000	15,837,131
C-130 Oil Cooler Augmentation						3,950,000	63,890
HC-130 Oil Cooler Augmentation						3,300,000	0
C-130 Improved Night Vision Imaging System (NVIS) Cockpit Lighting						3,200,000	159,100
C-130 Crash-resistant Loadmaster Seats						2,700,000	0
C-130 Armor						2,607,000	0
C-130 Surface-To-Air Fire (SAFIRE) Lookout Capability						2,000,000	0
WC-130 Civil Satellite Communications (SATCOM)						2,000,000	4,938,129
C-130 APN-241 Radar						800,000	0
HC-130 Crash-resistant Loadmaster Seats						600,000	0
C-130 Computerized Takeoff and Landing Data (TOLD)						500,000	0
C-130 Yoke-mounted Chaff/Flare Dispensers						500,000	369,675
F-16 Center Display Unit						4,500,000	4,500,000
F-16 "Flair-Up" Modification for Pylon Integrated Dispenser System (PIDS) Flare Dispensers						2,000,000	0
F-16 Simulation Training Device Upgrade (PA)						1,100,000	1,100,000
HH-60 Smart Multi-Function Color Display (SMFCD) & Situation Awareness Data Link (SADL)						4,000,000	4,000,000
Security Forces Weapons and Tactical Equipment						100,000	4,279,685
F-16 Advanced IFF							4,973,307
Vehicles							121,753
Total				**$215,768,000**	**$187,387,000**	**$55,000,000**	**$55,000,000**

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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 2014 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

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Table 8

Significant Major Item Shortages

NOTE: This table provides 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 [1]	Rationale/Justification
1	C-130 Large Aircraft Infrared Countermeasures (LAIRCM)	58	2	$3,000,000	$6,000,000	System provides C-130s an advanced infrared countermeasures system designed to protect aircraft against man-portable (shoulder-launched) infrared-guided surface-to-air missiles.
2	A-10/F-16 Day/Night Helmet-mounted Integrated Targeting System (HMIT)	81	27	$144,417	$7,600,000	Funds HMIT for all AFR A-10 & F-16 aircraft. Helmet-mounted displays provide critical flight and weapons information directly to the pilot without looking at panel mounted instruments.
3	HC-130 Hostile Fire Indication System	5	5	$275,000	$2,400,000	Hostile Fire Indication System alerts aircrews to hostile fire threats. Currently, aircrews are frequently unaware their aircraft were targeted by hostile ground fire. This modification upgrades AAR-47 sensors, increasing the probability of hostile ground fire detection and enabling aircrew to take evasive maneuvers, increasing aircraft survivability.
4	HH-60 Rotor Brake	15	15	$333,000	$4,995,000	Funds HH-60 rotor brakes required for safe ground operations by reducing rotor slow-down time. Operation UNIFIED PROTECTOR and strategic guidance have demonstrated an increased propensity to operate off floating platforms with associated confined spaces and safety concerns.
5	March Control Tower Communications Equip Relocation	1	1	$1,380,000	$1,380,000	Purchases new radars, scopes, and radios for the new March Control Tower, relocating existing ancillary equipment as required. AFR cannot operate the airfield from the new control tower without this capability.
6	C-130 Modular Aerial Spray System (MASS)	6	5	$2,900,000	$15,600,000	Replaces the current MASS with a newly designed system. The current MASS system is no longer in production and becoming increasingly more difficult and expensive to maintain. The new system is required to meet current and future aerial spray applications directed by the Center for Disease Control, homeland defense, and DoD requirements.
7	F-16/A-10 Cockpit Modernization: Electronic Flight Instrumentation System (EFIS), Center Display Unit (CDU) for Imagery and Data Transfer/Cursor on Target (COT) Integrated Display	96	96	$132,292	$12,700,032	Replaces aging aircraft analog flight instrument and mechanical gauges with modern technology multifunction displays that improve aircraft availability and allow the aircraft to be more accurate and lethal.

AFR

Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost [1]	Rationale/Justification
8	Trunked Land Mobile Radio (TLMR) for Homestead, Westover, and Grissom bases	6	3	$2,640,000	$7,920,000	Replaces the existing conventional Land Mobile Radio (LMR) system with a Trunked LMR. Provides compliance with Military Communications Electronics Board (MCEB) allotment plan for Land Mobile Radio (LMR) frequency usage, completing the final 3 repeated nets requiring upgrade.
9	Litening Advanced Targeting Pod-Sensor Enhanced (ATP-SE) Program	79	79	$500,000	$58,700,000	Implements the next ATP modernization spiral for Litening pods via the Sensor Enhanced (SE) modernization. The upgrade provides enhanced imagery that will allow for greater stand-off ranges and increase target identification as well as employing a digital two-way, data link inside the pod. The two-way data link will enhance communications with Tactical Air Control Parties. Upgrades 65 existing pods and procures 12 new pods.
10	Electronic Propeller Control System (EPCS)	53	53	$910,000	$58,600,000	The EPCS replaces the obsolescent and increasingly unsupportable synchrophaser and would reduce maintenance down time, reduce sustainment cost, and increase aircraft availability. The EPCS will also allow unrestricted throttle movement, eliminating the possibility of inducing a propeller stall due to excessive throttle movement.

1. Total shortage cost includes spares, and costs includes other costs such as Non-recurring Engineering, etc.

Chapter 6
United States Coast Guard Reserve

I. Coast Guard Overview

The Coast Guard (CG) is the Nation's premier maritime guardian over ports and waterways, on the sea, and around the globe. The CG is a unique force that carries out both civil and military responsibilities, touches nearly every facet of the U.S. maritime environment, and supports military missions and humanitarian efforts.

The Coast Guard delivers value to the Nation by administering programs and missions to ensure the maritime domain is safe and secure, and that care is taken to protect the marine environment. The role of the Coast Guard in the maritime domain is enduring while at the same time never being more relevant or more in demand – with long-standing responsibilities accrued over more than two centuries of service. The Coast Guard is organized into six programs, which are critical to achieving specific Quadrennial Homeland Security Review (QHSR) goals and objectives and advancing National priorities that together define Department of Homeland Security (DHS) missions. Table 6-1 below provides a listing of the six programs and their relationship to the Coast Guard's 11 statutory missions.

Table 6-1. Coast Guard Programs and Statutory Missions

DHS Programs	U.S. Coast Guard Statutory Missions
Maritime Security Operations	Ports, Waterways and Coastal Security—Operational Activities
Maritime Law Enforcement	Drug Interdiction
	Migrant Interdiction
	Living Marine Resources
	Other Law Enforcement
Maritime Prevention	Ports, Waterways and Coastal Security—Prevention Activities
	Marine Safety
	Marine Environmental Protection—Prevention Activities
Maritime Response	Search and Rescue
	Marine Environmental Protection—Response Activities
Defense Operations	Defense Readiness
Marine Transportation System Management	Aids to Navigation
	Ice Operations

As described in the United States Coast Guard 2012 Posture Statement, the CG is locally-based, nationally-deployed, and globally-connected. The American people need not look far along the shorelines of the United States to see CG units ready to respond to local emergencies or engaging the local maritime community. The CG monitors and protects more than 350 ports and 95,000

miles of coastline. Local units are the foundation of a necessary integrated and layered approach for success in mission execution.

Throughout America's maritime communities and the Exclusive Economic Zone, risk reduction and prosperity are enabled by the CG's vigilant safety and security presence. With nearly 90 percent of all global trade transported by sea, the CG continuously deploys its highly-trained forces to both develop and strengthen partnerships across the entire maritime domain. These partnerships allow a rapid and organized mobilization of critical response assets to where and when the Nation requires. The CG ensures local maritime communities of the restoration of commerce following natural and manmade disasters, and assists partner agencies in emergency response, conducting damage surveys from air and sea. CG personnel stationed throughout America's heartland were among the first responders to assist communities impacted by record-setting high water during the Midwest floods.

The CG promotes global maritime security through the deployment of an effective presence with specialized capabilities and skills in both the U.S. and international waters. Representing the United States in the International Maritime Organization, the CG serves as a leader to develop and advocate improvements to international maritime standards. The CG regularly participates in joint interoperability exercises and training to maintain international partnerships and networks, along with those competencies required to execute the most challenging maritime security missions, including those missions that support the requirements of the combatant commands (COCOMs). The CG provides personnel and equipment in support of COCOM requests for forces, performing global missions fitting into broad categories of Domestic Support, Expeditionary Operations, and Training, such as a Port Security Unit (PSU) embedded within a Navy Maritime Expeditionary Security Squadron (MSRON).

A. Coast Guard Planning Guidance

The CG executes an operational concept of Prevention-Response to meet the complex challenges presented by the constantly evolving maritime environment. Prevention emphasizes the necessity to identify hazards and threats, such as reducing vulnerabilities and minimizing requirements for emergency response or anticipating preventable casualties and damage through regulations, inspections, properly maintained waterways, port activity monitoring, and other activities.

When undesirable events occur, the CG is the Nation's maritime first responder. The locally-based yet nationally-deployable assets of the CG allow access to every region of the country, resulting in quick and effective response to persons in need, stabilization of disaster situations, and coordination of support through an array of internal capabilities and assets from a vast network of external partnerships.

The CG must simultaneously respond to the ever-increasing demands of today and prepare for those to come. The utmost diligent care of current resources must be exercised and investments made wisely to ensure the safety, security, and stewardship of our Nation's and international waters.

B. Coast Guard Equipping Policy

All equipment used for CG domestic operations is provided through the DHS budget. The CG's Active Component (AC) owns and manages all equipment, including equipment that is allocated

for the Reserve Component (RC). The AC provides equipment for Reserve mobilizations or surge operations from existing unit inventories, supporting units, or through procurement procedures using the DHS budget.

Specific equipment for the CG to utilize while performing defense operations in support of overseas contingency operations (OCO) in Central Command (CENTCOM) and Southern Command's (SOUTHCOM's) areas of operation has been funded through the DoD OCO budget allocation to the CG. The equipment includes boats, spare parts, communications gear, and weapons systems that are interoperable with the U.S. Navy and allied forces, and other special purpose equipment (body armor, ISU-90 shipping containers, and uniforms) that meets DoD requirements. The Coast Guard Reserve's primary end users of DoD OCO-funded equipment are the eight PSUs, which deploy in support of the COCOMs on a rotating basis.

C. Plan to Fill Mobilization Shortages in the RC

In FY 2012, approximately 955 Selected Reserve (SELRES) personnel were mobilized in support of OCO compared to 765 in FY 2011. This 25 percent increase reflects the necessity for more reservists to be mobilized to fulfill current mission requirements. The majority of these mobilized personnel provided security for military outload operations within the continental United States (CONUS). Others served as members of PSUs and MSRONs operating in Guantanamo Bay, Kuwait, and Bahrain, and as individual mobilization augmentees supporting CG missions.

In order for the Coast Guard Reserve to remain a ready operational force that can support and perform CG missions, the AC must fully fund and provide all necessary equipment for RC training, augmentation during daily operations, and mobilizations or surges. Although the Coast Guard Reserve is not reducing total end strength in FY 2013, consideration must be taken in planning for future budget constrained years, to potentially reduce force structure to preserve resources for sufficient training to prevent a "hollow force" that would be ill prepared to respond to contingencies.

D. Initiatives Affecting RC Equipment

The PSUs and Mobile Support Units (MSUs) maintain a constant state of readiness to deploy for "all threats and all hazards" in support of the COCOMs as well as CG port security missions—their ability to deploy is dependent on the availability of AC and DoD-funded training platforms and equipment for operations. For the CG to sustain and support DoD efforts, additional funding is required to secure additional Reserve training platforms.

DoD's transition out of Iraq and Afghanistan requires the CG's Redeployment Assistance and Inspection Detachment (RAID) teams, comprised of RC and AC personnel, to deploy overseas to prepare, inspect, and placard military equipment and shipping containers before they are shipped back to the U.S. or to other locations. The RAID teams are an important asset to DoD for mission aspects entailing shipping equipment. In FY 2012, RAID teams completed 197 U.S. Customs missions in Afghanistan, inspected 11,600 containers in Afghanistan and Kuwait, reviewed 847 hazardous material shipping documents, and trained 841 Army personnel on hazardous material shipping. The RAID teams currently work out of three bases in Afghanistan

and one base in Kuwait. They will require increased funding for operations and equipment to sustain increasing recovery of shipments.

E. Plan to Achieve Full Compatibility between AC and RC

Approximately 82 percent of the SELRES force is directly assigned to AC units. These reservists train and perform their duties side-by-side with AC personnel, executing daily operations to meet CG missions. The remaining 18 percent is assigned to Deployable Specialized Forces units or to DoD units and staffs.

The COCOM contingency plans validate requirements for deployable CG units. This includes the PSUs, MSRONs, RAID teams, and MSUs.

II. Coast Guard Reserve Overview

A. Current Status of the Coast Guard Reserve

1. General Overview

The Coast Guard Reserve (CGR) supports three core strategic functions: maritime homeland security, national defense (domestic and expeditionary), and domestic disaster operations. As an integrated force multiplier, Reserve personnel serve alongside AC members in support of DHS programs and CG statutory missions.

Top Coast Guard Reserve Equipping Challenges

- Personal Protective Equipment (PPE)
- Port Security Unit (PSU) and Mobile Support Unit (MSU) equipment
- Availability of equipment platforms for Reserve training, qualification, and certification

The RC, as the Service's "in-garrison" surge workforce capability, provides a significant increase in the CG's ability to execute its missions and respond to natural disasters. To build a more proficient, ready force, the CGR developed two important initiatives: the Concept of Reserve Employment (CORE) and the Reserve Force Readiness System (RFRS).

CORE is doctrine developed to build Reserve force capabilities that support the CGR's strategic functions and ensures that reservists are ready to mobilize with critical competencies in boat operations, contingency planning and response, expeditionary warfare, marine safety, port security, law enforcement, and mission support. RFRS was designed to bridge readiness, training, and force employment gaps that emerged in the post-Reserve integration period. RFRS assists with prudent strategic planning and defines requirements to ensure disciplined management of the Reserve force. Together, CORE and RFRS engender highly-trained and well-qualified personnel to respond to all threats and hazards at all times.

The CGR is comprised of 8,100 funded billets, which is approximately 20 percent of the CG's total force strength. The CG Reserve Training (RT) Appropriation for FY 2012 provided $134M for necessary CGR expenses as authorized by law: operations, administration, and maintenance of the Reserve program, personnel and training costs, and services. The RT Appropriation does not provide funding for equipment and machinery assets such as boats, vehicles, boat engines, and rescue equipment.

2. Status of Equipment

a. Equipment On-hand

Table 1 identifies the major equipment inventory for FY 2014–2016. All equipment is procured and accounted for by the AC.

Two main platforms used by the CGR are the Defender Class Response Boat and the Transportable Port Security Boat (TPSB). The Defender Class Response Boat serves as a mobilization platform for reservists assigned to CG stations throughout the Nation and domestic military outload security operations involving the protection of DoD high-value assets. The TPSB serves as the platform for personnel assigned to PSUs.

Defender Class Response Boat

Generation III Transportable Port Security Boat

During FY 2012, Generation III TPSBs were replaced with the Generation IV TPSB. The new TPSB allowed for a significant increase in capability and performance. Its larger size allows operation in rougher sea states while incorporating enhanced defensive capabilities through integrated ballistic protection. The CG delivered 48 boats to PSUs and an additional four boats to the Special Missions Training Center (SMTC) in Camp Lejuene, North Carolina in FY 2012.

Generation IV Transportable Port Security Boat

b. Average Age of Major Items of Equipment

Table 2 presents the average age of equipment used for AC and RC training and operations. The aging vehicles are of considerable concern, as they are utilized to haul personnel and tow mission-essential boats and equipment for training and mission execution.

c. Compatibility of Current Equipment with AC

PSUs provide security and protect military and critical assets. Due to their unique mission requirements, TPSBs are maintained mostly in the PSU inventories; however, SMTC maintains four TPSBs used to fulfill training requirements. The communications and weapons systems, as well as navigation packages, are the same as those found in the AC and require periodic maintenance, upgrades, and repairs.

All other platforms and equipment the RC uses are shared with the AC.

d. Maintenance Issues

Units maintain an adequate preventative maintenance schedule; however, in some cases, aged and high-mileage vehicles require replacement, not maintenance.

e. Modernization Programs and Shortfalls

The CG continues to pursue replacement of its aging assets. As boat platforms and other equipment are replaced, the RC will require additional training to become proficient on the new equipment and maintain operational readiness.

Current boat resources are inadequate to simultaneously support both SELRES training and rapidly changing in-theater COCOM requirements.

f. Overall Equipment Readiness

Equipment is in a manageable state of repair, but continues to decline due to increasing demand on CG services.

The current fleet of Generation IV TPSBs has steering issues in that have restricted them from deploying overseas pending modification. Full recapitalization of the Generation III TPSBs has not been completed due to these issues. A number of Generation III TPSBs will remain in the inventory until the fleet of Generation IV TPSBs is fully operable both within and outside of CONUS.

B. Changes since the Last NGRER

Although the CG RT Appropriation received a $978K increase in FY 2012 from FY 2011, the increase was due mainly to the military pay raise. Consequently, appropriation funding still is lower than previous years, directly impacting RC training opportunities and mobilization readiness.

FY 2012 saw a 10 percent increase in the personal protective equipment (PPE) shortfall for mission execution required by billets. This shortfall continued to FY 2013, and price increases for PPE raised the PPE shortfall from approximately $549K in FY 2012 to $620K in FY 2013.

A number of Generation III TPSBs have been kept on inventory due to steering issues with the Generation IV TPSB fleet. PSUs currently operate ten Generation III TPSBs within CONUS for operational training and potential deployment. Twenty-two Generation III TPSBs were withdrawn from PSU inventories during FY 2012 as they were replaced with the Generation IV TPSBs.

In FY 2012, PSUs procured 24 required generators with distribution panel and 84 additional tents, lowering the total shortage by approximately $15.2M. PSUs also revalidated their equipment requirements and no longer require 15,000 pound forklifts, skid steer loaders, and multi fuel heaters. This further reduced their equipment shortage.

Due to revalidated CG needs, four Generation IV TPSBs were delivered to SMTC vice seven as previously planned. As a result, SMTC’s inventory includes five Generation III TPSBs and four Generation IV TPSBs. Two of the Generation IV TPSBs require re-hulling. The nine TPSBs will remain on SMTC inventories through FY 2016.

In FY 2012, MSUs procured one tools and equipment trailer, eight tents, four portable water tanks, and four grey water tanks, which reduced its total shortage cost by $214K.

C. Future Years Program (FY 2014–FY 2016)

1. FY 2016 Equipment Requirements

Table 1 provides projected FY 2014–FY 2016 inventories and requirements for major equipment. All equipment is procured and accounted for by the AC.

2. Anticipated New Equipment Procurements

PSUs will procure eight additional 5kW generators in FY 2014 totaling $4K.

MSUs will procure two additional power distribution centers at a cost of $24K in FY 2013, and one 10,000 lb. forklift at a cost of $90K in FY 2014.

SMTC will procure three environmental control units (ECUs) (HP-2C/388 IPT) at a cost of approximately $391.5K in FY 2015.

3. Anticipated Withdrawals from RC Inventory

In FY 2013, two Open Bulk Storage Trailers will be withdrawn from MSU inventories.

In FY 2015, two ECUs (T2-93040G) will be withdrawn from the SMTC inventory.

4. Remaining Equipment Shortages and Modernization Shortfalls at the End of FY 2016

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

There are six Generation III TPSBs used by PSUs operating outside of CONUS in CENTCOM and SOUTHCOM supporting Operations Enduring Freedom and New Dawn. The TPSBs come directly out of PSU inventories and require replacement by Generation IV TPSBs.

CG unit operations and maintenance funds managers include PPE in annual budget requests. In recent years, budget constraints have created a gap between the amount of funding available and the amount required. Funding for PPE is based on a five year cycle, which provides the unit enough funding to fully outfit each member with new/serviceable equipment at the end of a five-year period. The five-year cycle was developed in part based on the equipment service life and member assignments or transfers.

The AC provides PPE for both AC and RC personnel using its operations and maintenance funds. The RT Appropriation does not pay for PPE. Approximately 5,100 billets, or 65 percent, of the CGR have mobilization requirements that require PPE to safely conduct CG operations. The annual shortfall in PPE for RC personnel is estimated to be approximately $620K. Table 6-2 provides the FY 2013 PPE funding shortfall. The absence of PPE impedes Reserve mobilization readiness. Reservists who are not properly outfitted are unable to safely perform CG operations, which renders them unable to achieve or maintain mobilization competencies.

*Table 6-2. Coast Guard FY 2013 PPE Funding for the RC**

Unit/PPE Type	Cost	# of Personnel	Total	Total/Year
Ashore (Reserve) Basic Ensemble (Station)	$1,620	2,044	$3,311,280	$662,256
Ashore (Reserve) Cold Ensemble (Station)	$1,490	1,493	$2,224,570	$444,914
Ashore (Reserve) Basic Ensemble (ANT)	$1,620	11	$17,820	$3,564
Ashore (Reserve) Cold Ensemble (ANT)	$1,490	9	$13,050	$2,610
Sector Ops (Reserve) Basic Ensemble	$1,620	740	$1,198,800	$239,760
Sector Ops (Reserve) Cold Ensemble	$1,490	416	$619,840	$123,968
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		5,157	$8,699,072	$1,739,814
Total	$8,699,072			
Total/Year	$1,739,814		Annual Shortfall	
Total Available	$1,119,775		$(620,039)	

* FY 2013 PPE funding based on a five-year replacement cycle.

D. Summary

The CG protects those on the sea, threats delivered by sea, and the sea itself. The CGR is a flexible and responsive operational force that performs CG missions each and every day. Sustaining an operational Reserve requires ongoing funding for training and equipment. While there is no immediate negative impact on mission capability, declining budgets may ultimately impact training capacity and operational readiness for the CGR. Since the CGR is fully integrated with the AC, ongoing operational needs limit the availability of platforms and equipment for Reserve training, qualification, and certification, which further impacts Reserve readiness.

USCGR

Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major items of equipment. It provides the quantity on-hand (QTY O/H) projected to be in the inventory at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) needed to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendations as to the quantity and type of equipment which should be in the inventory of each Reserve Component. FY 2014 unit cost estimates are provided by the Military Departments.

Nomenclature	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Port Security Units (PSUs)						
Generators w/ Distribution Panel	$500,000	24	24	24	24	24
Generation IV - 32' Transportable Port Security Boat	$495,000	48	48	48	48	48
Generation III - 25' Transportable Port Security Boat	$186,346	6	0	0	0	0
Armory, Portable	$75,000	1	1	1	1	8
Vehicle, F550 Stakebed (1 per unit)	$56,000	6	6	6	6	8
Vehicle, F450 Pick-up (5 per unit)	$46,000	8	40	40	40	40
Vehicle, F350 Pick-up	$45,000	32	0	0	0	0
Forklift (1 per unit)	$45,000	6	6	6	6	1
PRC-117F Radio, Tri-band (1 per boat and 4 at each unit / 10 radios per unit)	$45,000	80	80	80	80	80
Radio Set AN/PRC-117G	$39,070	80	80	80	80	80
Tents	$38,000	112	112	112	112	112
PRC-152A Radio (1 per boat and 2 spares at each unit)	$15,392	96	288	288	288	0
All Terrain Vehicle, Gator (1 per unit)	$14,000	10	10	10	10	8
Generator 15kW	$12,000	5	5	5	5	8
Water Buffalo (1 per unit)	$10,000	2	8	8	8	8
ISU 90 Shipping Container (20 per unit)	$9,600	160	160	160	160	160
Utlility Trailer (1 per unit)	$7,000	3	3	3	3	3
Generator, Signal Synthesizer, Frequency, MG3641N (500 KHz to 1024 MHz AM/FM)	$6,955	8	8	8	8	8
XTS 5000 Handheld Radio (1 per boat and 2 spares at each unit)	$5,500	288	0	0	0	0
Generator 5kW (2 per unit)	$5,000	9	9	9	9	8
Counter, Frequency (DC to 500HHzCW)	$4,461	8	8	8	8	8
Analyzer, Communication	$4,390	8	8	8	8	8
Fuel Bladder 3K Gallons	$3,885	80	80	80	80	88
Fuel Containment Boom	$3,395	24	24	24	24	48
Generator Digital Clock Pulse, Synthesizer (Part #98)	$3,286	8	8	8	8	8
Meter, Modulation (AM/FM Carrier Frequency 30 to 100 MHz)	$3,001	8	8	8	8	8
Voltmeter, Analog (5 Hz to 10 MHz, 0 DBM = 1MW/600 OHMS, Average)	$2,977	8	8	8	8	8
Radio, VHF Motorola XTL-5000 Mobile	$2,839	96	96	96	96	96
Analyser, Distortion (10 Hz-100 KHz)	$2,487	8	8	8	8	8
Mobile Support Units (MSUs)						
Trailers, Tools / Equipment	$150,000	1	1	1	1	1
Truck, Stakebed (2 per detachment)	$126,000	4	4	4	4	4
Generator, 240kW	$120,000	4	4	4	4	4
Forklift, 10,000 lb.	$90,000	1	2	2	2	2

USCGR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Unit Cost	Begin FY 2014 QTY O/H	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	End FY 2016 QTY O/H	End FY 2016 QTY REQ
Trailer, Administrative Support (1 per detachment)	$86,463	2	2	2	2	2
Trailer, Maintenance Shop	$83,688	7	7	7	7	7
Trailer, Logistic Support Parts (3 per detachment)	$58,462	6	6	6	6	6
Trailer, Open Bulk Storage (3 per detachment)	$49,600	4	4	4	4	4
Truck, Pick-up (1 per detachment)	$45,000	2	2	2	2	2
A/C - H/P (Air Rover Units) w/25kW Generators	$40,000	4	4	4	4	4
Forklift, 6,000 lb.	$40,000	1	1	1	1	1
CONNEX Boxes, 40' X 8'	$30,000	4	4	4	4	4
Portable Welding/Cutting Shops (1 per detachment)	$30,000	2	2	2	2	2
Generator, Microsilent 20kW	$20,000	4	4	4	4	4
CONNEX Boxes, 20' X 8'	$20,000	4	4	4	4	4
CONNEX Boxes, 8' X 8'	$15,000	2	2	2	2	2
Power Distribution Center	$12,000	4	4	4	4	4
AC&R Repair and Service Kits (1 per detachment)	$10,000	2	2	2	2	2
DC Kit, Compressed Air & GenSet (1 per detachment)	$8,000	2	2	2	2	2
Tents, GP	$7,000	8	8	8	8	8
Gator, 6X6 Diesel Terrain Vehicle (1 per detachment)	$6,500	3	3	3	3	3
Generator, Light Tower	$5,716	5	5	5	5	5
Generator, Microsilent 10kW	$3,500	4	4	4	4	4
General Purpose Tents, 18' X 18' (3 per detachment)	$3,000	6	6	6	6	6
Diesel Powered Welder	$3,000	1	1	1	1	1
Portable Water Tanks	$1,150	4	4	4	4	4
Grey Water Tanks	$800	4	4	4	4	4
Special Missions Training Center (SMTC)						
Generation IV - 32' Transportable Port Security Boat	$495,000	4	4	4	4	4
Generation III - 25' Transportable Port Security Boat	$186,346	3	3	3	3	3
ECU (HP-2C/338 IPT)	$130,497	0	3	3	3	3
ECU (82-GET35kW8TN)	$103,185	1	1	1	1	1
ECU (HP4-DL)	$94,259	1	1	1	1	1
ECU (T2-93040G)	$82,922	4	2	2	2	2
Drash Shelter (M)	$28,000	3	3	3	3	3
Base X Shelter (6D31)	$27,966	1	1	1	1	1
Base X Shelter (505)	$24,190	1	1	1	1	1
Base X Shelter (307)	$18,445	4	4	4	4	4
Drash Shelter (L)	$18,331	12	12	12	12	12
Base X Shelter (305)	$13,008	8	8	8	8	8
15kW Generator	$16,160	2	2	2	2	2
Trailer, Tank	$12,955	2	2	2	2	2
Drash Shelter	$9,237	5	5	5	5	5
ISU 90 Shipping Container	$8,600	1	1	1	1	1
Base X Shelter (203)	$8,392	3	3	3	3	3
5kW Generator	$8,145	2	2	2	2	2
* The AC manages all equipment for the Coast Guard Total Force.						

USCGR
Average Age of Equipment

Table 2

NOTE: This table provides the average age of selected major items of equipment. The average age provides a projected average age of the fleet at the start of FY 2013.

Nomenclature	Average Age	Remarks
Port Security Units (PSUs)		
Generators w/ Distribution Panel	<1	
Generation IV - 32' Transportable Port Security Boat	<1	
Generation III - 25' Transportable Port Security Boat	7	
Armory, Portable	1	
Vehicle, F550 Stakebed (1 per unit)	8	
Vehicle, F450 Pick-up (5 per unit)	1	
Vehicle, F350 Pick-up	1	
Forklift (1 per unit)	5	
PRC-117F Radio, Tri-band (1 per boat and 4 at each unit / 10 radios per unit)	11	
Radio Set AN/PRC-117G	7	
Tents	<1	
PRC-152A Radio (1 per boat and 2 spares at each unit)	<1	
All Terrain Vehicle, Gator (1 per unit)	<1	
Generator 15kW	6	
Water Buffalo (1 per unit)	7	
ISU 90 Shipping Container (20 per unit)	6	
Utlility Trailer (1 per unit)	8.0	
Generator, Signal Synthesizer, Frequency, MG3641N (500 KHZ to 1024 MHZ AM/FM)	4	
XTS 5000 Handheld Radio (1 per boat and 2 spares at each unit)	7	
Generator 5kW (2per unit)	1	
Counter, Frequency (DC to 500HHZCW)	9	
Analyzer, Communication	7	
Fuel Bladder 3K Gallons	7	
Fuel Containment Boom	<1	
Generator Digital Clock Pulse, Synthesizer (Part #98)	<1	
Meter, Modulation (AM/FM Carrier Frequency 30 to 100 MHZ)	7	
Voltmeter, Analog (5 HZ to 10 MHZ)	7	
Radio, VHF Motorola XTL-5000 Mobile	7	
Analyser, Distortion (10 HZ-100 KHZ)	6	
Analyser, Distortion (10 HZ-100 KHZ)	7	
Mobile Support Units (MSUs)		
Trailers, Tools / Equipment	<1	
Truck, Stakebed	5	
Generator, 240kW	3	
Forklift, 10,000 lb.	5	

USCGR
Average Age of Equipment

Table 2

Nomenclature	Average Age	Remarks
Trailer, Administrative Support	3	
Trailer, Maintenance Shop	3	
Trailer, Logistic Support Parts	3	
Trailer, Open Bulk Storage	2	
Truck, Pick-up	6	
A/C - H/P (Air Rover Units) w/25kW Generators	4	
Forklift, 6,000 lb.	6	
CONNEX Boxes, 40' X 8'	12	
Portable Welding/Cutting Shops	6	
Generator, Microsilent 20kW	5	
CONNEX Boxes, 20' X 8'	4	
CONNEX Boxes, 8' X 8'	8	
Power Distribution Center	1	
AC&R Repair and Service Kits	4	
DC Kit, Compressed Air & GenSet	4	
Gator, 6X6 Diesel Terrain Vehicle	5	
Generator, Light Tower	6	
Generator, Microsilent 10kW	5	
General Purpose Tents, 18' X 18'	1	
Diesel Powered Welder	6	
Portable Water Tanks	<1	
Grey Water Tanks	<1	
Special Missions Training Center (SMTC)		
Generation IV - 32' Transportable Port Security Boat	1	
Generation III - 25' Transportable Port Security Boat	7	
ECU (82-GET35kW8TN)	5	
ECU (HP-2C/338)	<1	
ECU (HP4-DL)	6	
ECU (T2-93040G)	7	
Drash Shelter (M)	7	
Base X Shelter (6D31)	5	
Base X Shelter (505)	5	
Base X Shelter (307)	6	
Drash Shelter (LG)	8	
Base X Shelter (305)	5	
15kW Generator	9	
Trailer, Tank	11	
Drash Shelter (SM)	8	
ISU 90 Shipping Container	14	
Base X Shelter (203)	5	
5kW Generator	9	

USCGR

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 2014 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016.

Nomenclature	FY 2014	FY 2015	FY 2016

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 2013 would be expected to arrive in RC inventories in FY 2014 or FY 2015. All values are costs in dollars.

Nomenclature	FY 2011	FY 2012	FY 2013

Table 4 not applicable for USCGR

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 2014 Qty	FY 2015 Qty	FY 2016 Qty	Remarks

Service has no planned transfers or withdrawals for the years FY 2014 thru FY 2016.

USCGR

Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares what the Service planned to procure and transfer to the RC in FY 2010 with actual procurements and transfers. FY 2010 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 2012. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2010 Transfers (# of items)		FY 2010 Procurements ($s)		FY 2010 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual

USCGR had no planned or actual transfers or procurements of major equipment during FY 2010

USCGR

Table 7

Major Item of Equipment Substitution List

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

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2014 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

USCGR

Table 8

Significant Major Item Shortages

NOTE: This table provides 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 [1]	Item Cost	Total Shortage Cost	Rationale/Justification
1	Portable Scales	32	32	$9,380	$300,160	Port Security Unit (PSU) requirement for contingency operations (ops)
2	Truck, Class 8 Stake Body	4	2	$126,000	$252,000	Primary means of transporting Mobile Support Unit (MSU) 24' and 32' deployable trailers
3	Searchlight Set	8	8	$7,700	$61,600	PSU requirement for contingency ops
4	Forklift, Hyster 10,000 lb.	2	1	$90,000	$90,000	Primary means of moving MSU connex and ISU 90 containers during deployments
5	Vidmar, Storage Container	88	88	$3,246	$285,648	PSU requirement for contingency ops
6	Generator, Diesel 25kW	8	4	$20,000	$80,000	Provides power to MSU parts trailers during deployments
7	Fuel Bladder 3K Gallons	88	8	$3,885	$31,080	PSU requirement for contingency ops
8	Computer, Laptop	4	4	$4,000	$16,000	Required for managing MSU repair part inventories via web based program
9	Fuel Bladder 1K Gallons	88	88	$2,117	$186,296	PSU requirement for contingency ops
10	Fuel Containment Boom	48	24	$3,395	$81,480	PSU requirement for contingency ops
11	Vehicle, F450 Pick-up (1 per unit)	40	32	$46,000	$1,472,000	PSU requirement for contingency ops
12	Armory, Portable	8	7	$75,000	$525,000	PSU requirement for contingency ops
13	Detection, Wide Area Radiation	8	8	$31,000	$248,000	PSU requirement for contingency ops
14	Indentifinder-U (IR)	8	8	$17,000	$136,000	PSU requirement for contingency ops
15	Recorder, Boroscope Digital Video System	16	16	$5,432	$86,912	PSU requirement for contingency ops
16	Fly Away Kit, AFN	16	16	$5,329	$85,264	PSU requirement for contingency ops
17	PRC-152A Radio (1 per boat and 2 spares at each unit)	288	192	$15,392	$2,955,264	PSU requirement for contingency ops
18	Power Amplifier RF-7800UL-B150 (1 per PRC-117G radio)	80	80	$20,000	$1,600,000	PSU requirement for contingency ops
19	Palm IR, Thermal Imager	16	16	$9,450	$151,200	PSU requirement for contingency ops
20	MILO Range Enforcement System	16	16	$48,000	$768,000	PSU requirement for contingency ops
21	Generator 15kW	8	3	$12,000	$36,000	PSU requirement for contingency ops
22	Water Buffalo (1 per unit)	8	6	$10,000	$60,000	PSU requirement for contingency ops

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 March 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 suppress insurrections (10 U.S.C. §§ 331–333), provide assistance in cases of weapons of mass destruction or terrorist attacks (10 U.S.C. § 12304(b)), or to repel invasions, suppress rebellions, or execute the laws of the United States (10 U.S.C. § 12406) 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 2014 to 2016 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 2014–FY 2016
  - remaining shortfall for FY 2017 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 missions. 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 2010 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 2014 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 2014, 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 2013.

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 2010 Planned vs Actual Procurements and Transfers. This table compares what the Service planned to procure and transfer to the RC in FY 2010 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 2012.

Planned Quantity is the item quantity the Service programmed to deliver to the RC as part of the budgeting process.

Actual Quantity is the item quantity the Service actually delivered or has in the procurement cycle to deliver to the RC.

Table 7: Major Item of Equipment Substitution List. A list of equipment authorized by the Service to be used as a substitute for a primary item of equipment. This table also identifies whether this substitute item is suitable for deployment in time of war.

Nomenclature (Required Item/Substitute Item), see *Table 1* description for nomenclature.
Equipment Number (Required Item/Substitute Item), see *Table 1* description for equipment number.

Table 8: Significant Major Item Shortages. The top ten items of equipment and modernization/upgrades, which are not funded in the FY 2014–2016 Future Years Defense Program, are listed in this table in priority order. If additional funds were to become available, the RC would apply those funds to the highest priority item on this list.

Appendix B
National Guard Readiness for Emergencies and Major Disasters

I. FY 2008 National Defense Authorization Act Changes to the National Guard and Reserve Equipment Report (NGRER)

The *Fiscal Year* (*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.

The Chief, National Guard Bureau (CNGB) must provide a statement of the accuracy of previous National Guard equipment inventory projections and an explanation of projections not met. Additionally, the FY 2008 NDAA requires the CNGB to certify the inventory of equipment items that were due to be procured for the NG in the preceding year, but were not received.

The CNGB memorandum in Figure B-1 addresses the CNGB certification required by Section 1826 of the FY 2008 NDAA.

NATIONAL GUARD BUREAU
1636 DEFENSE PENTAGON
WASHINGTON, DC 20301-1636

01 FEB 2013

MEMORANDUM FOR DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR RESERVE AFFAIRS (MATERIEL AND FACILITIES)

SUBJECT: Public Law 110-181 Section 1826 Certification

In combination with the attached Fiscal 2014 National Guard and Reserve Equipment Report, I submit this statement of accuracy in accordance with Title 10 U.S.C. § 10541(d), which requires the Chief of the National Guard Bureau to certify preceding National Guard equipment inventory projections, including items not received, and to explain if projections were not met.

Although progress continues to be made, Army and Air Force processes still do not provide the transparency needed to fully account for equipment delivered to National Guard units compared to what was budgeted and appropriated by Congress. Despite improved data collection and supporting systems, the current process does not generate the necessary data to accomplish all of the specified reporting requirements. Tracking and visibility of major end item assets and redistribution of end items have proven to be complex, multi-layered tasks.

The National Guard, working together with the Secretary of Defense for Reserve Affairs, the Army and Air Force, will continue to pursue transparency, traceability, and delivery of National Guard equipment from the President's Budget request to delivery at the unit level. The equipping goals of the National Guard are to ensure Soldiers and Airmen have the required equipment to execute assigned missions.

The point of contact for this issue is COL Anthony Johnson, NGB Logistics Deputy Director, at (703) 607-0015.

Frank J. Grass
General, USA
Chief, National Guard Bureau

Attachment:
As stated

cc:
ASA (M&RA)
ASAF (M&RA)
DARNG
DANG

Figure B-1. CNGB Memorandum

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 perform the responsibilities of the National Guard pursuant to sections 331, 332, 333, 12304(b), and 12406 of title 10, United States Code (U.S.C.), in response to an emergency or major disaster.

1. Overview

The equipment used by the National Guard to suppress insurrections (10 U.S.C. §§ 331-333), provide assistance in cases of weapons of mass destruction (WMD) or terrorist attacks (10 U.S.C. § 12304(b)), or to repel invasions, suppress rebellions, or execute the laws of the United States (10 U.S.C. § 12406) in an emergency or major disaster comes 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 sources to meet unique tasks, conditions, or standards for disaster operations 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 policy that, to the extent practicable, emergency or major disaster functions are performed using dual-use equipment. It is also NGB policy to facilitate the generation of emergency or major disaster response forces, wherever possible, using existing Army or Air Guard units, either individually or in combination.

In 2010, DoD established 10 NG-sourced Homeland Response Forces (HRFs). The HRFs were organized as part of the DoD reorganization of its domestic chemical, biological, radiological, and nuclear (CBRN) consequence management enterprise, initiated during the 2010 Quadrennial Defense Review. The 10 HRFs are regionally based in each Federal Emergency Management Agency (FEMA) region. HRFs are designed to be more consistent with the tiered local-state-Federal approach of our national response system and have enhanced lifesaving capabilities, improved operational flexibility, and reduced response times. HRFs are primarily equipped to deploy via organic ground transport to CBRN incident sites, but can be moved by military air, if necessary. The core of each HRF is a CBRN Task Force similar to the 17 existing CBRN and High-yield Explosives (CBRNE) Enhanced Response Force Packages (CERFPs). However, HRFs also have command and control and sufficient general purpose forces to assist in maintaining access control and managing throughput within the area of operations. The name of the HRF's Security Forces has officially changed to CBRNE Assistance Support Element. The 10 NG HRFs (Ohio, Washington, Massachusetts, New York, Pennsylvania, Georgia, Texas, Missouri, Utah, and California) completed their External Evaluations by the end of FY 2012.

The National Guard has fielded, and is currently sustaining, the Joint Incident Site Communications Capability (JISCC) package. This system provides standardized communications within the 10 HRFs and the 17 CERFPs. The JISCC package provides capabilities, such as radio cross-banding, commercial internet access, public switched telephone network, Nonsecure Internet Protocol Router Network (NIPRNET), and Secret Internet Protocol Router Network (SIPRNET). These capabilities are needed to be interoperable with other government and civilian entities. The National Guard also uses the JISCC package to support the NG's other defense support of civil authorities (DSCA) missions and state missions.

NG CBRN response forces are equipped first with dual-use equipment, and then augmented, as necessary, with special GOTS/COTS equipment. The WMD Civil Support Teams (WMD-CSTs), which are required by law, are the notable exception to this unit approach.

The National Guard WMD-CSTs were established in 1998, with the initial 10 WMD-CSTs certified by the Secretary of Defense (SecDef) to Congress in August 2001. As required by section 1403 of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314), DoD established a total of 55 WMD-CSTs, one in every state and territory and two in California. In 2006, starting with the Department of Defense Appropriations Act, 2007 (Public Law 109-289), Congress funded the addition of a second WMD-CST in Florida and New York. However, the President's FY 2013 Budget discontinued these two WMD-CSTs. Once these two WMD-CSTs are disestablished, as permitted by section 1435 of the National Defense Authorization Act for Fiscal Year 2013 (Public Law 112-239), 55 WMD-CSTs will remain operational. By statute and SecDef directive, these units perform duties, at the direction of the governor, to prepare for or respond to any emergency involving the use of a weapon of mass destruction in the United States. The WMD-CSTs may also provide a rapid response to the intentional or unintentional release of nuclear, biological, radiological, toxic, or poisonous chemical materials and respond to a natural or manmade disaster in the United States that results in, or could result in, catastrophic loss of life or property. The mission of WMD-CSTs is to support civil authorities at the known or suspected domestic CBRN site by identifying CBRN agents/substances, assessing current and projected consequences, advising on response measures, and assisting with requests for additional state support. In the third quarter FY 2012, WMD-CSTs conducted 102 response missions and 583 standby events. These operational numbers have steadily increased in each fiscal year. Response missions are defined as WMD-CST deployments in response to validated requests for support from local, state, or Federal agencies, other than NGB. Response missions included 70 responses to suspected CBRN substances, 27 manmade incidents, and 4 natural disasters. Standby missions are those missions in which a WMD-CST deploys to provide WMD-CST expertise at an event where the WMD-CST may be the only asset or is staged with other state assets to conduct operations, including events identified by the state chain of command, VIP Protective Details (including presidential and gubernatorial protective details), or special events. In FY 2012, WMD-CSTs supported the November 2011 Asia-Pacific Economic Cooperation Leaders' Meeting, the May 2012 North Atlantic Treaty Organization Summit, the August 2012 Republican National Convention, and the September 2012 Democratic National Convention. These standby events included pre-staging at event sites, CBRN monitoring and detection, reach-back services for local first responders, and joint training operations with the other components of the CBRN enterprise.

In addition to the FY 2012 response and standby missions, WMD-CST conducted of 2,117 assist missions, for a total of 2,383 events in the first ten months of FY 2012. Assist missions include contingency operations liaison, capabilities briefs, technical assistance, mission reconnaissance, mutual support on how to minimize vulnerability to a CBRN incident, or as part of a national, state, or local WMD Command Post Exercise or Field Training Exercise where unit capabilities are planned and demonstrated in accordance with scenario changes. In FY 2012, assist missions included liaison visits and briefings to demonstrate and explain to state and Federal agencies and local responders the WMD-CST capabilities to complement and enhance, not duplicate, state CBRN capabilities, and 654 collective training exercises.

DSCA is a critical mission in the NG support to civil authorities. DoD is committed to the objective that every state and territory 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 (including Joint Force Headquarters), CBRN consequence management, engineering assets, communications, transportation (surface), aviation/airlift, medical, security, logistics, and maintenance.

The National Guard Reaction Forces (NGRFs) are a trained and ready force able to provide governors or combatant commanders with quick reaction and rapid response capabilities in each state or territory. The NGRFs are capable of responding and assisting in the protection of critical infrastructure, other state or national assets, and any other missions as directed to promote stability and security in the state, territory, and Nation. The NGRFs are equipped with non-lethal capabilities to enhance their ability to respond to homeland defense (HD) and homeland security missions and provide force protection measures and capabilities for NGRF personnel.

The NGRF possesses non-lethal capabilities to assist civilian authorities with domestic support 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 state 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 the diverse and challenging threats military forces face.

2. Army National Guard Equipment

a. ARNG Equipment Shortfalls

The ARNG continues to field equipment from FY 2009–FY 2012 procurement funding. The ARNG still lacks funding for certain critical dual-use (CDU) items.

Figure B-2 outlines the FY 2014 ARNG Top 25 Equipment Modernization/Shortfall Category List, of which 15 categories contain CDU items and are filled to less than 80 percent. The most notable items on the list are in Aviation Systems, Chemical Systems, Combat Mobility, Domestic Operations, General Engineering, Tactical Electrical Power, and Training Devices/Simulators. *Table 8 Significant Major Item Shortages* in the ARNG data tables section provides a top ten prioritized shortage list for major items of equipment required for wartime missions that are currently not fully funded in the Future Years Defense Program. Units must be prepared for HD and DSCA missions regardless of what phase they are in within the Army Force Generation cycle. The Army Equipping Strategy is to fill each of the approved CDU equipment line items to at least 80 percent.

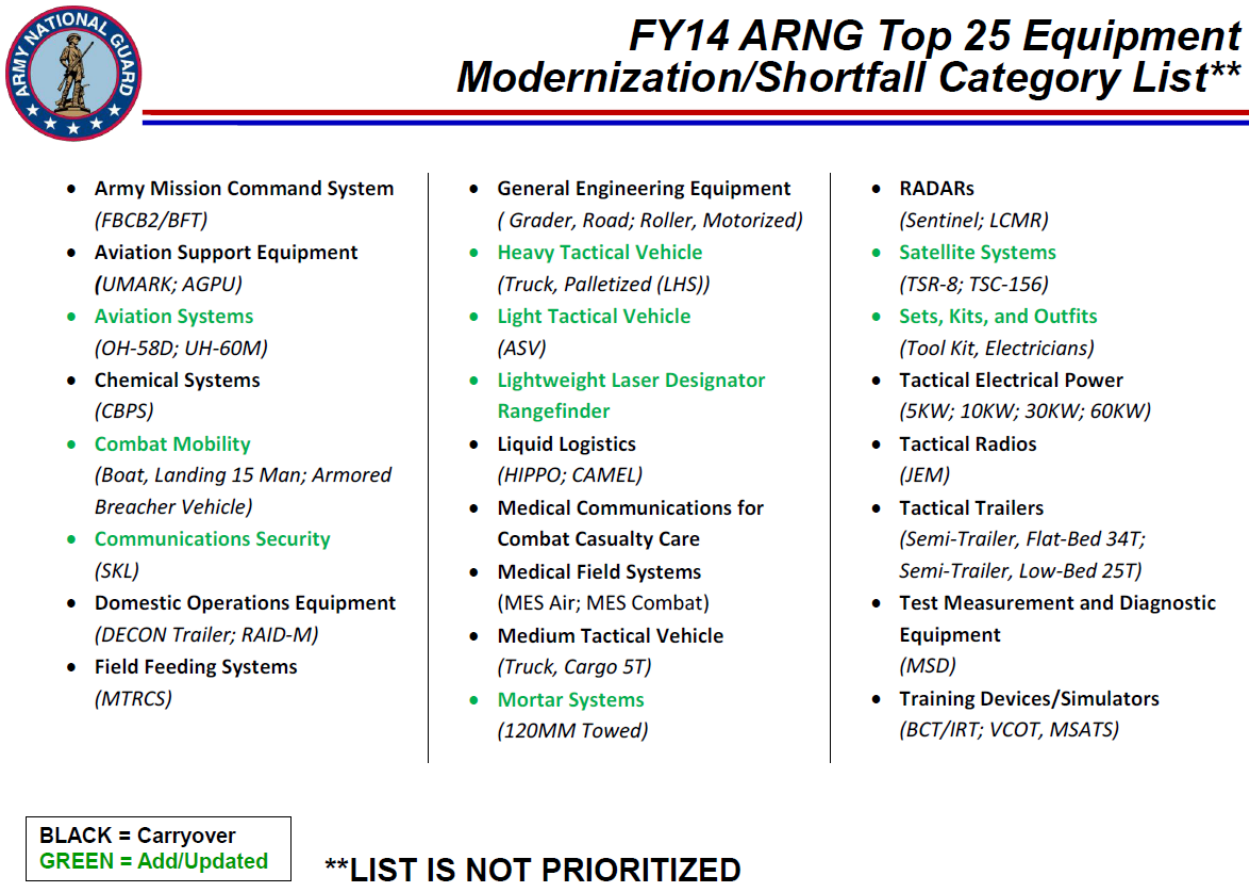

Figure B-2. ARNG Top 25 Shortfall List

The most notable shortfall items on ARNG's *Table 8 Significant Major Item Shortages* are in aviation modernization, general engineering equipment, chemical protection systems, transportation, and medical field systems.

i. Aviation Modernization

The overall health of the aviation portfolio is good. The UH-60 Blackhawk A-A-L modernization effort is still the top priority. FY 2014 equipment on-hand (EOH) quantities comprise a mixed fleet of new build, cascaded, and retiring legacy aircraft. At the current UH-60 Blackhawk conversion and cascade rate (from the A model to the L models), it will take until FY 2023 to fully divest the UH-60A Blackhawk fleet. The UH-72A Lakota is scheduled to be fully fielded by FY 2016.

ii. Transportation

The ARNG fully supports the Army's strategy of modernizing and extending the HMMWV service life by recapitalization. The Army's HMMWV Recapitalization Plan, if funded, will allow the ARNG to extend the economic useful life of over 3,300 legacy HMMWVs. The ARNG's plan to purchase 500 HMMWV ambulances remains on target for deliveries beginning in the third quarter of FY 2013. At completion, the ARNG will increase the HMMWV ambulance EOH to 100 percent by second quarter FY 2014.

iii. General Engineering Equipment

This equipment category includes heavy/light horizontal construction, vertical construction, diving, and firefighting equipment critically under filled or past its useful life cycle. These items are required for DSCA and combat missions. NGREA funding has been used consistently over the last few years to supplement base funding for this equipment, which is still a priority shortage category for the ARNG.

iv. Communications

The Department of the Army has programmed to transition the 59 currently fielded ARNG JISCCs into a program of record managed by Program Manager Warfighter Information Network-Tactical, the Army's Tactical Data Network. The NGB-J6 is working with Headquarters, Department of the Army (HQDA) G8 to ensure that sustainment and training are included in this fielding. However, the Army's operational requirements may impact this program and delay the proposed fielding schedule of JISCC replacements. If this delay occurs, then continued NGREA funding would be needed to ensure availability of technology refreshment procurement funding to replace end-of-life technologies.

b. Effects of ARNG Shortfalls

Until a modernized replacement is developed and fielded for the Army (not expected earlier than 2022), the ARNG's seven Avenger Battalions will be using legacy Avenger Systems that are more than twenty years old. ARNG shortfalls result in the continued use of the legacy systems and an HD/DSCA capability gap. For example, ARNG's aviation shortfall means the ARNG is still using the UH-60A fleet that is over 20 years old. Shortfalls of ARNG equipment also impact ARNG's ability to achieve full interoperability with the Active Component (AC). In today's theaters of operation, the Army relies on a robust network to share sensitive mission command information. While this is not a CDU system, shortfalls in Secure Mobile Anti-jam Reliable Tactical Terminal (SMART-T) equipment reduces the ARNG's ability to provide anti-jamming capabilities during combat operations. Chemical and Biological Protective Shelter (CBPS) shortfalls continue to threaten the readiness of ARNG units to respond to chemical and biological threats with continuous emergency medical treatment. No alternative Army program of record solutions are in place to reduce the risk associated with the absence of this capability.

c. ARNG Investment Strategies

The ARNG has successfully used NGREA funding to mitigate key ARNG shortfalls. The ARNG invested $154M of NGREA funds in aviation, engineering, medical, and logistics systems. The ARNG also invested $45M of NGREA funds to procure equipment in FY 2012 that can be used for HD and DSCA missions. In addition, training systems were also procured in FY 2012 to support individual and collective training, investing $123M. Future NGREA funds will continue to focus on the procurement of high-priority CDU items that have a projected shortfall and adversely impact overall readiness.

The Army continued aggressively pursuing transparency and traceability of procurement-funded equipment from the President's Budget request to delivery at the unit level during FY 2012. The Army has taken multiple steps toward achieving transparency, including institutionalizing a formal Post-Appropriation Reconciliation Process (PARP), supporting two Integrated Product Teams (IPTs)

and an Enterprise Management Office, publishing quarterly Equipment Transparency Reports (ETRs), and maintaining component-specific funding information throughout the procurement cycle. The Army is leveraging a Transparency General Officer Steering Committee to manage this effort.

As of the fourth quarter FY 2012, the Army was collecting transparency data for 116 systems, a significant increase from 30 systems that were initially identified in FY 2009 when data collection began. These 116 major systems were selected based on their importance to the ARNG and Army Reserve. As of the fourth quarter FY 2012, ARNG funding for the 116 systems included in data collection totals approximately $4.36B in FY 2009, $3.61B in FY 2010, $3.29B in FY 2011, and $3.14B in FY 2012.

Despite the uncertainty of receiving formal appropriations in any given fiscal year, HQDA continues to utilize the PARP to realign enacted funding with Congressional intent and HQDA budgetary requests. This process has the effect of re-establishing component-specific funding splits so that the ARNG receives adequate funding to achieve its procurement strategy objectives and to maintain its high state of equipment availability and readiness. Core to the process, the PARP establishes a metric from which deviations can be identified and assessed to determine, among other actions, whether payback actions are warranted and to gauge the overall efficiency of post-appropriation funds execution.

To increase accuracy and decrease redundant efforts, 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, and the processes required to systematically validate the accuracy of the data collection efforts and tie a specific piece of equipment back to its funding source are implemented.

3. Air National Guard Equipment

DoD procures ANG equipment for the purpose of executing Federal missions, utilizing authorizations that are aligned to Tables of Allowances (TAs). The TAs prescribe the equipment necessary to perform Federal missions. As a rule, ANG and AC units are equitably treated when setting equipment distribution priorities, and authorizations are filled using a priority system that includes operational priority and first-to-fight logic. While some equipment items are acquired using COTS contracts and are used to support both Federal and state 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 both Federal and state missions and is classified as “dual use.” Current equipment tracking methods show, 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 (392,899 pieces) has a valid use in both Federal and state missions. 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 95 percent (373,818 pieces) of all authorized dual-use items on-hand within the categories of the Essential 10 capabilities (see Table B-1). The 95 percent equipment availability rate is comparable to the overall AF availability rate.

Table B-1. ANG Support Equipment (SE) and Vehicles

August 2012							
CABABILITY	AUTH QTY	INUSE QTY	FILL RATE	AUTH COST	INUSE COST	NEEDED QTY	NEEDED COST
Aviation SE	60,159	57,736	96%	$4,198,749,259	$3,674,198,391	2,423	$524,550,868
Civil Support & Force Protection	2,788	2,581	93%	$906,436,715	$839,136,715	207	$67,300,000
Command & Control	10,645	10,550	99%	$593,820,624	$589,881,770	95	$3,938,854
Communication	6,052	6,015	99%	$46,308,262	$30,679,625	37	$15,628,637
Engineering	25,914	24,233	94%	$211,068,089	$170,691,198	1,681	$40,376,891
Logistics	86,841	81,309	94%	$83,131,369	$68,378,381	5,532	$14,752,988
Maintenance	110,369	104,960	95%	$2,347,358,505	$1,965,553,121	5,409	$381,805,384
Medical	8,593	9,079	106%	$3,296,706	$2,742,567	0	$0
Security	65,577	62,973	96%	$130,643,534	$114,449,239	2,604	$16,194,295
TOTAL SE	**376,938**	**359,436**	**95%**	**$8,520,813,063**	**$7,455,711,007**	**17,988**	**$1,064,547,917**
VEHICLES	15,961.00	14382	90%	$1,202,338,767	$794,817,685	1,579	$407,521,082
TOTAL SE & VEHICLES	**392,899**	**373,818**	**95%**	**$9,723,151,830**	**$8,250,528,692**	**19,567**	**$1,472,068,999**

The ANG also benefits from the AF's general guidelines to use mostly AC equipment in support of overseas contingency operations (OCO). Currently, only 1.8 percent of ANG equipment is deployed in support of OCO. Another 1.1 percent of ANG equipment is deployed throughout the 54 states and territories in support of domestic operations.

a. ANG Equipment Shortfalls

Despite the equipment support provided by the AF, the ANG still has shortfalls in critical DSCA areas. Aggravating these critical shortfalls is the advancing age of some ANG equipment, which could result in a barrier to meeting ANG domestic support responsibilities. A more detailed review of the ANG equipment health is described in the following five categories of the Essential 10 capabilities.

i. Logistics

The overall ANG logistics fill rate status is good at 94 percent. However, limited domestic availability of some personal protective equipment (PPE) continues to be a limiting factor and drives the metric down. However, Air Force funding in this area continues to mitigate these shortfalls, ensuring ANG members that respond to Federal or state missions have the necessary PPE to be effective.

ii. Engineering

The overall engineering fill rate status is excellent at 94 percent. However, prime power, route clearance, search and rescue, and firefighting equipment shortages are inhibiting the ANG's ability to concurrently perform home station, overseas deployments, or NG domestic support missions. For example, power generation capability used to provide stable, reliable electrical power in deployed environments either abroad or during NG domestic support operations requires an investment of over $18M to redress shortfalls. During domestic support operations, this power could 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 facility 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 working diligently through the Joint Domestic Operations Equipment Requirements (JDOERs), NGREA, and central AF procurement processes to acquire prime power capability to ensure safe, reliable, and effective power is available for Federal and state missions. For example, the ANG recently acquired, through NGREA appropriations, power generation capability for the 150th Civil Engineering Squadron (CES). The 150th CES is the pilot unit for this capability.

iii. Transportation

Vehicle on-hand status is excellent at 90 percent. Additionally, with the new vehicle life cycle management, the impact of DSCA missions has been minimized for most of the fleet. However, the change still reflects the Medium Tactical Vehicle fleet with a below average age of 19.6 years and a health/in-commission rate of 76.7 percent. With ever-shrinking budgets and competing priorities, the resources applied to these vehicles are also diminishing. Additionally, the medium tactical vehicles directly impact the ANG capability to respond to DSCA missions, since they are called upon most frequently in high-water and massive debris removal situations.

iv. Security

The overall security fill rate status is excellent at about 96 percent with shortfalls in modular small arms ranges, explosive detection, less-than-lethal kits, and mobility bags totaling approximately $116M. While Security Forces (SF) and ANG own and operate 12 small arms ranges, the cost of maintenance and sustainment of these ranges is in excess of $1M per year. The conditions of these ranges continue to deteriorate over time and, as a result of their age and frequent use, are in constant need of maintenance and repair. The costs to maintain the current ranges outweigh the benefits of sustaining them. Additionally, with only 12 ranges in operation, the ANG must rely heavily upon other agencies to utilize their range space to prepare ANG forces for their wartime missions. The result is scheduling conflicts and, in some cases, expenses for the use of the small arms range. This becomes a daunting task to integrate ANG Airmen training in small arms ranges owned and operated by outside agencies, both civilian and military. The procurement of a modular small arms range at each installation will provide all ANG warfighters with the capability and immediate availability to complete required small arms training to meet mission requirements. The current cost for one small arms range is approximately $5M; ANG shortfalls are substantial, but logistically placing these ranges throughout each region and state would increase each unit’s capability. The initial fielding cost for 20 ranges is $100M.

SF requires outfitting with the most modern equipment available due to their extremely high operations tempo, air expeditionary force deployments, HD and DSCA missions, and state operations. Explosive device threats/incidents overseas are increasing in numbers and complexity, and ANG SF has limited capability to detect this threat, resulting in a major vulnerability. The ANG SF has no K-9 support, and the ability to procure K-9 resources is not an option. Handheld explosive detection equipment is an alternative solution. The ability to detect explosives at base entry control points can fortify installation security and provide a higher level of safety and security for all Airmen. ANG SF currently has a $5M shortfall of 150 explosive detection devices.

Additionally, the inability for ANG SF to effectively respond with less-than-lethal force to any given scenario creates a liability and puts the safety of ANG Airmen at risk. AF Use of Force

(UoF) regulations mandates less-than-lethal options between basic verbal commands and lethal force; this less-than-lethal equipment shortfall greatly hinders our SF to effectively employ its required UoF tactics. In many scenarios, the use of less-than-lethal force is a more appropriate solution than the use of deadly force. Security incidents often involve an increased risk to the public until first responders can secure the scene; less-than-lethal capabilities are essential to mitigating the associated risk. Additionally, this kit aligns ANG SF with its AC counterparts. ANG SF currently has an $8M shortfall of 150 less-than-lethal force kits.

SF deploy at an extended and more frequent rate that of most other Airmen. This high ANG SF operations tempo has caused SF mobility bag equipment to degrade at a higher rate, and generating a higher monetary bill for replacement and sustainment. Current SF mobility bag shortfalls are approximately $3M.

The identified shortages are limiting the ANG SF ability to concurrently provide the public safety and security at home station and during OCO and DSCA missions. These shortages have previously been identified, and the ANG is attempting to fill the requirements through central AF procurement processes or through other funding sources such as NGREA.

v. Communications

The overall communication fill rate status is approximately 99 percent. There exists several mission essential systems that are operating in a degraded state, have exceeded their economical useful life, or have not kept pace with the technological advancements, causing this equipment to become questionable for both Federal and domestic missions. Additionally, due to Federal and state mission needs, the ANG continues to require sustainment support for interoperable, National Incident Management System (NIMS)-compliant communication. These important communications systems have been assigned a lower priority, which may potentially affect support to Federal and state command authorities.

The ANG continues to pursue sustainment, modernization, and acquisition of NIMS-compliant communications systems. These systems provide the ability to share and manage information in near real-time with all NG stakeholders, vertically (combatant commander, state, incident) and horizontally (interagency), as well as the ability to establish, maintain, and coordinate situational awareness of all NG command, control, communications, and intelligence assets among NG users and stakeholders. System life-cycle maintenance, modernization requirements, and integrated security controls remain a challenge as these systems have not been integrated into AF requirements as expected.

b. Effects of ANG Shortfalls

Improved availability of equipment strengthens readiness for the ANG to defend not only U.S. interests abroad, but also facilitates the safety and security of the 54 states, territories, and the District of Columbia. Shortfalls in equipment may not prevent or delay an ANG response. Additionally, the added equipment helps guarantee improved capability to train on mission-essential equipment used in both Federal and state missions.

See Chapter 5, Section II, for additional information on ANG shortfalls in equipment and modernization.

c. ANG Requirements and Acquisition Strategies

Basic ANG requirements are determined through a Total Force process to identify standard support equipment required for Federal missions. Variants are then made based on the unique missions and conditions of ANG units. Additionally, critical capability gaps are identified and vetted in an open and rigorous forum of warfighters, who are experts in their respective weapons systems. One venue is at an annual Weapons and Tactics Conference, the results of which are approved by the Director, ANG. A similar process is conducted at the annual JDOERs conference, which will be held in August 2013. The capability requirements that come out of these gatherings are translated into specific programs that are COTS or GOTS, and require only non-developmental integration into a weapons system. These capabilities and associated programs are documented in the annual *Weapons Systems Modernization Priorities Book* and JDOERs Book.

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 interchangeable across the AF enterprise, such as PPE, communications equipment, and some vehicles. The ANG has also been aggressive in seeking other funding sources to replace items that have been expended supporting Federal and state missions. Lastly, the ANG takes full advantage of NGREA funding to procure any authorized support equipment items that increase a unit's ability to support domestic missions, or to modernize equipment to ensure its reliability, relevancy, and responsiveness to future Federal or state missions.

4. Specialized Equipment

Specialized equipment is unique equipment that is specific to the DSCA mission, is not considered dual-use, and is specifically authorized by Congress. 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 WMD-CSTs without spares, such as generators and specialized vehicles. The result is likely a single point of failure for a WMD-CST mission, lessening the team's capability until replacements are obtained, or suitable substitutes are repositioned from other WMD-CST units. As noted above, adequate funding for pacing item modernization, life-cycle management of legacy COTS and GOTS equipment, and a rapid acquisition process to support the procurement of leading edge technologies is paramount to both relevance and reliability of unit capabilities.

The HRF and CERFP missions have not changed, and the equipment is being sustained. Within the NG CBRN Enterprise (10 HRFs and 17 CERFPs), 10 have received new, tailored medical assemblage upgrades with the remainder to receive tailored medical assemblages via NGREA funding.

b. Effects of Shortfalls of Specialized Equipment

The WMD-CST and CERFP issues are limiting factors, with no specific effects unless equipment failure occurs.

The 10 new HRF units have passed the Exercise Evaluations and achieved full operational capability. The 17 CERFP units are receiving the upgraded medical equipment and supplies funded last year to be current with the approved Allowance Standards.

While the HRF and CERFP missions have not changed, the equipment was replaced or upgraded significantly to better fit the mission. The new medical assemblages and upgrades for the current 17 CERFP units were procured with NGREA. The medical resupply process has been established this year. The process requires three HRF/CERFP medical resupply assemblages and one Expeditionary Medical Support (EMEDS) Health Response Team (HRT) resupply assemblage to reduce the supply chain risk to an acceptable level. The Air Force Medical Service established the EMEDS HRT resupply Allowance Standards. ANG recently approved the HRF/CERFP medical resupply Allowance Standards, and will fund three assemblages this fiscal year. Each assemblage will be equivalent to a three-day supply of the HRF/CERFP Patient Care Assemblage.

The ANG Consolidated Storage and Deployment Centers (CSDCs) located in Topeka, KS; Horsham, PA; and Fairchild AFB, WA provide logistical support and equipment preventative maintenance for the 27 HRF/CERFP units. The CSDCs ensure precise calibration of rapid response medical equipment, deploy EMEDs assemblages and HRF/CERFP medical resupply assemblages. The CSDCs currently do not have mobile equipment calibration sets or a vehicle to transport the calibration sets to perform medical preventative maintenance at the HRF/CERFP units. Additionally, the CSDCs do not have dedicated forklift capability to ensure rapid deployment of medical assets.

The ANG anticipates total shortfalls of $7M–$8M based on an anticipated new allowance standard block upgrade for the EMEDS +10/+25, the HRF/CERFP resupply assemblages, and EMEDS HRT resupply assemblages. 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, AF, 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. NGB continues to work with DoD to pursue modernization for equipment used by WMD-CSTs as technology evolves. The CBDP has programmed increases for research, development, test, and evaluation; procurement; and life-cycle management for WMD-CST equipment, although 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. Army National Guard

The Army has shown steady improvement toward achieving transparency. With regard to financial traceability, the ARNG has confidence in the level of fidelity the Army has provided to date. However, this effort has not provided the capability to certify delivery of equipment. The certification of materiel delivery requires 100 percent confidence that an item was received by a unit and can be traced back to an appropriation.

The Army will continue to oversee proposed changes, and improve business processes and data collection through web-based applications. The intent is to simplify the transparency process and to achieve full transparency through the incorporation of Item Unique Identification (IUID) as part of Global Combat Support System-Army (GCSS-A), which is projected to reach full operability in FY 2017. It is believed that once IUID is fully implemented, it and GCSS-A capabilities will allow the Army to attain full auditable traceability as required by the 2008 NDAA.

Despite the significant progress, the ARNG remains unable to assess delivered quantities against those that were due in, as specified in the NDAA reporting requirement. The ARNG must have the ability to systematically audit and validate delivery data by year of appropriation.

2. Air National Guard

To meet the equipment transparency requirements in NDAA 2008, the Deputy Assistant Secretary of the Air Force for Acquisition Integration (SAF/AQX) developed new guidelines for crafting the RC President's Budget exhibits. Additionally, modernization of AF logistics systems, in concert with IUID, is designed to improve warfighter capability by transforming Air Force logistics business processes and leveraging ongoing initiatives and capabilities 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. Modernization of AF logistics systems 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. Links with AF funding systems will better allow all AF Components to trace equipment expenditures from procurement to delivery. The IUID initiative is ongoing as well, including all ANG bases. This initiative will eventually tag all ANG equipment with an informational "license plate" to 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 for both the Federal and state missions. However, there are equipment shortfalls in areas that are key support 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 NG 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. In the near future, the maturation of these reports and modernization of the AF logistics system should combine to provide the transparency needed for all Air Force equipment procurement processes.

C. Conclusion

The National Guard continues to implement mission and programmatic changes to meet transparency requirements through focused leadership, equipping strategies, and modernization. The Services are continuing to transition from a strategic reserve to an operational force while sustaining their HD and DSCA missions. Although equipment transparency and visibility are now much better than in years past, supporting automation systems currently in use for data collection do not yet generate the data necessary to fully meet requirements. Major end item asset visibility and redistribution have proven to be complex, multilayered tasks. The National Guard, working together with the Army and Air Force, have aggressively pursued methods to build cooperation and create capabilities, such as establishing automated reporting linkages to procurement appropriations. Further improvements will be put in place to achieve a balance between requirements and resources.

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Appendix D
Acronym Glossary

Acronym	Nomenclature
AAO	Army Acquisition Objective
AC	Active Component(s)
ACC	Air Combat Command
ACS	Agile Combat Support
ADOS	active duty operational support
ADS	aircraft defensive systems
ADT	active duty for training
AEA	airborne electronic attack
AEF	air and space expeditionary force
AESA	Active Electronically Scanned Array
AF	Air Force
AFB	Air Force base
AFMC	Air Force Materiel Command
AFMS	Air Force Medical Service
AFR	Air Force Reserve
AFRC	Air Force Reserve Command
AFSOC	Air Force Special Operations Command
AIFF	advanced identification, friend or foe
AIP	antisurface warfare improvement program
AM	amplitude modulation
AMC	Air Mobility Command
AMCM	airborne mine countermeasures
AMD	Air Missile Defense
AMDPCS	Air/Missile Defense Planning and Control System
AMP	Avionics Modernization Program
AMRAAM	advanced medium-range air-to-air missile
ANG	Air National Guard
AoA	Analysis of Alternatives
AOC	air and space operations center
AOR	area of responsibility
APOE	aerial port of embarkation
AR	Army Reserve
ARB	Air Reserve Base
ARFORGEN	Army Force Generation
ARI	Automatic Reset Induction
ARNG	Army National Guard
ARS	Air Reserve Station (Air Force)
ARS	Armored Reconnaissance Squadron (Army)
ASW	antisubmarine warfare
AT	annual training
ATC	air traffic control
ATM	Air Traffic Management
ATP	advanced targeting pod
AVTE	Aviation Virtual Training Environment
BA	Battlefield Airman
BD	Barge Derrick

Acronym	Nomenclature
BFT	Blue Force Tracker
BLOS	beyond line-of-sight
BMUP	block modification upgrade program
BOG	Boots on the Ground
BOI	basis of issue
BOS	Budget Operating System
BSERV	Bomb Squad Emergency Response Vehicle
C2	command and control
C2CRE	C2 CBRN Response Element
CA	civil affairs
CAB	Combined Arms Battalion
CAC2S	Common Aviation Command and Control System
CAF	combat air forces
CBDP	Chemical and Biological Defense Program
CBPS	Chemical and Biological Protective Shelter
CBRN	chemical, biological, radiological, and nuclear
CBRNE	chemical, biological, radiological, nuclear, and high-yield explosives
CCIR	Cyberspace and Critical Infrastructure Range
CDD	Capabilities Development Document
CDU	critical dual use
CDU	center display unit
CENTCOM	United States Central Command
CERFP	CBRNE Emergency Response Force Package
CES	civil engineering squadron
CFLI	Core Function Lead Integrator
CG	Coast Guard
CGR	Coast Guard Reserve
CHARCS	Counterintelligence/Human Intelligence Automated Reporting and Collection System
CMC	Commandant of the Marine Corps
CNGB	Chief, National Guard Bureau
CNO	Chief of Naval Operations
CNS	Communication, Navigation, Surveillance
COCOM	combatant command
CONUS	continental United States
CORE	Concept of Reserve Employment
COTS	commercial off–the-shelf
CR	Continuing Resolution
CRC	control and reporting center
CRF	Coastal Riverine Force
CRP	Core Radio Package
CS	combat support
CSAF	Chief of Staff, United States Air Force
CSAR	combat search and rescue
CSDC	Consolidated Storage and Deployment Centers
CSS	combat service support
CST	Civil Support Team
CW	cyber warfare
DARPL	Dynamic Army Resourcing Priorities List
DC IPT	Delivery Certification IPT

Acronym	Nomenclature
DCGS	Distributed Common Ground System(s)
DCGS-A	Distributed Common Ground System-Army
DCRF	Defense CBRN Response Force
DET	Displaced Equipment Training
DGS	distributed ground station
DHS	Department of Homeland Security
DMO	Distributed Mission Operations
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DOERs	Domestic Operations Equipment Requirements
D-RAPCON	Deployable Radar Approach Control (RAPCON)
DSCA	defense support of civil authorities
DSG	Drill Status Guardsman
EA	electronic attack
ECU	environmental control unit
EHS	Enhanced Mode S
EMEDS	expeditionary medical support
EO	electro-optical
EOD	explosive ordnance disposal
EOH	equipment on-hand
EPAWSS	Eagle Passive Active Warning and Survivability System
ESF	Emergency Support Function
ETR	Equipment Transparency Report
EXPCOMBATCAM	Expeditionary Combat Camera
FAA	Federal Aviation Administration
FABS	Fly-Away Broadcast System
FBCB2	Force XXI Battle Command, Brigade and Below
FEMA	Federal Emergency Management Agency
FFG	guided-missile frigate
FM	frequency modulation
FMTV	Family of Medium Tactical Vehicles
FOC	full operational capability
FRP	Fleet Response Plan
FSRG	Force Structure Review Group
FST IPT	Financial Synchronization and Transparency IPT
FTC	Full Training Capability
FTD	field training detachment (Air Force)
FTD	Flight Training Device (Marine Corps)
FTS	Full-time Support
FTU	formal training unit
FY	fiscal year
FYDP	Future Years Defense Program
GA	Guardian Angel
GBS	Global Broadcast System
GCSS-A	Global Combat Support System-Army
GCSS-MC	Global Combat Support System-Marine Corps
GOSC	General Officer Steering Committee

Acronym	Nomenclature
GOTS	government off–the-shelf
GPS	Global Positioning System
HBCT	heavy brigade combat team
HD	homeland defense
HIMARS	High Mobility Artillery Rocket System
HEMTT	heavy expanded mobility tactical truck
HM	helicopter mine countermeasures squadron (Navy)
HMIT	helmet-mounted integrated targeting system
HMM	Marine medium helicopter squadron
HMMWV	high mobility multipurpose wheeled vehicle
HQDA	Headquarters, Department of the Army
HRF	Homeland Response Force
HRT	Health Response Team
HSC	helicopter sea combat squadron (Navy)
HSL	helicopter antisubmarine squadron light (Navy)
HTV	Heavy Tactical Vehicle
ICAO	International Civil Aviation Organization
IDT	inactive duty training
IEW	intelligence and electronic warfare
IFF	identification, friend or foe
INS	inertial navigation system
IO	information operations
IP	Internet protocol
IPT	Integrated Product Team
IR	infrared
ISR	intelligence, surveillance, and reconnaissance
IT	information technology
IUID	Item Unique Identification
JDOER	Joint Domestic Operations Equipment Requirements
JFHQ	joint force headquarters
JHMCS	joint helmet-mounted cueing system
JIOR	Joint Information Operations Range
JISCC	Joint Incident Site Communications Capability
JLTV	Joint Light Tactical Vehicle
JRB	joint reserve base
JSF	Joint Strike Fighter
JSTARS	Joint Surveillance Target Attack Radar System
kHz	kilohertz
LAIRCM	Large Aircraft Infrared Countermeasures
LARS	Lightweight Airborne Radio System
LAV	light armored vehicle
LCM	landing craft mechanized
LCMR	Lightweight Counter-Mortar Radar
LCS	littoral combat ship
LCU	landing craft utility
LET	light equipment transport

Acronym	Nomenclature
LHS	Load Handling System
LIN	Line Item Number
LIW	Logistics Information Warehouse
LMI	Lead Materiel Integrator
LMST	Lightweight Multi-Band Satellite Terminal
LSRS	littoral surveillance radar system
LTV	Light Tactical Vehicle
LUH	Light Utility Helicopter
LVC	Live, Virtual, Constructive
LVSR	Logistics Vehicle System Replacement
MACCS	Marine air command and control system
MACS	Marine air control squadron
MAF	mobility air forces
MAFFS	Modular Airborne Fire Fighting System
MAGTF	Marine air-ground task force
MASS	Marine air support squadron
MASS	Modular Aerial Spray System (Air Force)
MAST	mobile ashore support terminal
MCA	maritime civil affairs
MCAST	Maritime Civil Affairs and Security Training (Command)
MCM	mine countermeasures
MEDEVAC	medical evacuation
MEEL	Mission Essential Equipment List
MEP	Mission Equipment Package
MFGI	Mobilization Force Generation Installation
MIDS	Multi-functional Information Distribution System
MIE	Major Items of Equipment
MISO	military information support operations
MOS	military occupational specialty
MPFUB	Maritime Prepositioning Force Utility Boats
MRAP	Mine Resistant Ambush Protected
MSATS	Modular Small Arms Training Systems
MSRON	maritime expeditionary security squadron (Navy)
MSU	mobile support unit
MTACS	Marine tactical air command squadron
MTOE	modified table of organization and equipment
MTRCS	Multi-Temperature Refrigerated Container System
MTT	mobile training team
MTV	Medium Tactical Vehicle
MWS	missile warning system
MYP	Multi-year Procurement
NAS	naval air station
NAVELSG	Navy Expeditionary Logistics Support Group
NBC	nuclear, biological, and chemical
NBCRV	Nuclear-Biological-Chemical Reconnaissance Vehicle
NCF	naval construction force
NCHB	Navy cargo handling battalion
NCR	naval construction regiment
NDAA	National Defense Authorization Act

Acronym	Nomenclature
NECC	Navy Expeditionary Combat Command
NEIC	Navy Expeditionary Intelligence Command
NET	New Equipment Training
NG	National Guard
NGB	National Guard Bureau
NGEN	Next Generation Enterprise Network
NGREA	National Guard and Reserve Equipment Appropriation
NGRER	National Guard and Reserve Equipment Report
NGRF	National Guard reaction force
NIMS	National Incident Management System
NIPRNET	Nonsecure Internet Protocol Router Network
NMCB	naval mobile construction battalion
NORTHCOM	United States Northern Command
NSW	naval special warfare
NUFEA	Navy-unique fleet-essential airlift
NVG	night vision goggle(s)
OASD(RA)	Office of the Assistant Secretary of Defense for Reserve Affairs
OCCM	on-condition cyclic maintenance
OCIE	Organizational Clothing and Individual Equipment
OCO	overseas contingency operations
OCONUS	outside the continental United States
OPFOR	opposing force
OPNAV	Office of the Chief of Naval Operations
OSD	Office of the Secretary of Defense
P-1R	Service Procurement Program - Reserve
PARP	Post-Appropriation Reconciliation Process
PDTE	Pre-deployment Training Equipment
PEI	Principal End Item
PIRL	Prioritized Integrated Requirements List
PLS	palletized load system
PPE	personal protective equipment
Prime BEEF	Prime Base Engineer Emergency Force
PSU	port security unit
QHSR	Quadrennial Homeland Security Review
RAID	Redeployment Assistance and Inspection Detachment
RAPCON	Radar Approach Control
RC	Reserve Component(s)
RED HORSE	Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer
RERP	reliability enhancement and re-engining program
RF	radio frequency
RFRS	Reserve Force Readiness System
RFT	ready for tasking
RPA	remotely piloted aircraft
RSMS	Readiness Sustainment Maintenance Site(s)
RSSC	radar-sonar surveillance center
RT	Reserve Training
RTIC	Real Time Information in the Cockpit

Acronym	Nomenclature
RVSM	reduced vertical separation minimum
RWR	radar warning receiver
SABER	situational awareness beacon with reply
SAF/AQX	Deputy Assistant Secretary of the Air Force for Acquisition Integration
SAFIRE	Surface-to-Air Fire
SATCOM	satellite communications
SCU 8	Software Capability Upgrade 8.0
SE	Support Equipment
SEAL	sea-air-land
SecDef	Secretary of Defense
SELRES	Selected Reserve
SF	security forces
SFA	security force assistance
SICPS	Standardized Integrated Command Post 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
SMFCD	smart, multi-function color display
SMTC	Special Missions Training Center
SOC	squadron operations center
SOF	special operations forces
SOUTHCOM	United States Southern Command
SRC	Surface Reserve Component (Navy)
SUW	surface warfare
T/A	Training Allowance (Marine Corps)
TA	Table of Allowances (Air Force)
TACLAN	tactical local area network
TDA	Table of Distribution and Allowances
TDL	tactical data link
TFI	Total Force Initiative(s)
T-GOSC	Transparency-General Officer Steering Committee
TO&E	table of organization and equipment
TOA	table of allowance
TOPGUN	Naval Fighter Weapons School
TPE	theater-provided equipment
TPSB	transportable port security boat
Trojan SPIRIT	Trojan Special Purpose Intelligence Remote Integrated Terminal
TS/SCI	top secret or sensitive compartmented information
TSW	Tactical Support Wing
TWV	Tactical Wheeled Vehicle
U.S.	United States
U.S.C.	United States Code
UAS	unmanned aircraft system
UAV	unmanned aerial vehicle
UHF	ultrahigh frequency
UoF	Use of Force
UON	Urgent Operational Need

Acronym	Nomenclature
USAR	United States Army Reserve
USCGR	United States Coast Guard Reserve
USMCR	United States Marine Corps Reserve
USNORTHCOM	United States Northern Command
USNR	United States Navy Reserve
USS	United States ship
USSOCOM	United States Special Operations Command
VAQ	tactical electronic warfare squadron (Navy)
VHF	very high frequency
VIP	very important person
VOIP	voice over Internet protocol
VP	patrol squadron (Navy)
VR	Fleet Logistics Support Squadron (Navy)
VSD	Vertical Situation Display
VTUAV	vertical takeoff and landing tactical unmanned aircraft system
WEPTAC	Air Reserve Component Weapons and Tactics Conference
WIN-T	Warfighter Information Network-Tactical
WMD	weapons of mass destruction
WMD-CST	Weapons of Mass Destruction Civil Support Team
WR-ALC	Warner Robbins Air Logistics Center
WRMS	war reserve materiel stock