DEPARTMENT OF DEFENSE

NATIONAL GUARD AND RESERVE EQUIPMENT REPORT FOR FISCAL YEAR 2015

March 2014

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(NGRER FY 2015)

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

March 2014

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FOREWORD

The Reserve Component (RC) allows for expanded capacity and capability as a cost-effective part of the Total Force with global reach and flexibility. Since 2001, the RC has supported more than 875,000 mobilizations worldwide.

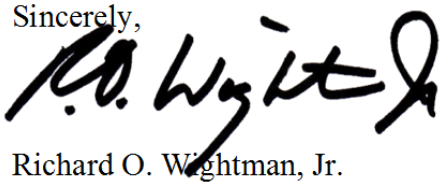
Budgetary pressures will continue to require astute management of reduced resources to mitigate their effects. The RC provides capability and capacity at a reduced cost in a time of funding reductions across all components. The RC, when integrated as part of the operational force during armed conflict and peacetime, provides for a cost-effective force mix at acceptable levels of risk to support the defense strategy.

The RC equipment levels are at some of the highest levels in history; however this era of postwar fiscal reductions will bring significant equipping challenges over the next several years. The Department has made strides in enhancing equipment transparency and accountability, but has not yet attained transparency into the Services procurement and distribution processes and outcomes. The Department must explore other options, such as separating the RC procurement funding, to meet the intent of the Commission on the National Guard and Reserve initiatives on equipping inadequacies between Active Component (AC) and RC. Unless the RC continues to be considered an indispensable part of the Total Force and resourced appropriately, equipment levels are likely to wane with potentially dire consequences.

Since 1982, Congress has funded the National Guard and Reserve Equipment Appropriation (NGREA) for procurement of aircraft, missiles, tracked combat vehicles, ammunition, weapons, and other procurement for the RC. We are extremely grateful to Congress for this supplement, but the Department needs to be cautious that the supplement does not become the primary means of equipping the RC. We will continue to emphasize increased communication with Congress to garner a common understanding concerning RC equipment on-hand and modernization levels.

Going forward, we will continue to strive to find an appropriate balance between the AC and a well-equipped and well-trained RC ready to assume full mission responsibility when called.

Sincerely,



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Performing the Duties of the Assistant
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Table of Contents

Chapter 3 United States Marine Corps Reserve

Chapter 4 United States Navy Reserve

Chapter 5 United States Air Reserve Components

Chapter 6 United States Coast Guard Reserve

Chapter 1 Overview

I. Strategic Context

A mission-ready Reserve Component (RC) is critical to our National Security Strategy. To maintain mission readiness in today's fiscal environment, a Total Force policy supporting employment of the RC in both operational and strategic roles is essential for ensuring a relevant well-equipped and well-trained RC. Future force planning initiatives will focus Military Departments on best Total Force mix determination through organizational assessment based on capability, capacity, cost and readiness.

Current budget reductions will also impact future Total Force mix determination. These reductions will drive careful consideration of appropriate Active Component (AC)/RC structure based on resource optimization. A merging of military capabilities, across the AC/RC, increases the overall capability and capacity with ready-trained forces at a more efficient cost. In a post-Afghanistan environment, using RC forces as a rotational presence, rather than maintaining a forward-based force facilitates an AC/RC partnership geared to support combatant commander requirements. A strategic AC/RC mix based on operation plans also promotes an enduring relationship between units. Maintaining manning levels, training programs, and equipment availability will ensure an operationally ready RC.

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 2015 NGRER highlights 913 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 2010 NGRER	FY 2011 NGRER	FY 2012 NGRER	FY 2013 NGRER	FY 2014 NGRER	FY 2015 NGRER
ARNG	411	404	396	365	271	320
AR	220	212	208	215	230	231
USMCR	101	195	213	150	212	201
USNR	35	36	44	42	42	40
ANG	31	31	31	30	30	29
AFR	17	17	16	20	18	17
USCGR	19	19	19	53	74	75
Total	**834**	**914**	**927**	**875**	**877**	**913**

III. Equipment Shortages

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.

The Army National Guard (ARNG) and Army Reserve (AR) equipment shortages are not included in Chart 1-2. The Army Chart 1-2 shortage data submitted was not transparent enough to determine shortfalls for the purpose of this chart. The Army data as submitted requires further analysis and calls into question the definition of modernized equipment. The FY 2014 NGRER displayed an Army RC aggregate shortage of $38.6B.

The Air National Guard (ANG) indicates a 5.5% shortage of its major items as of the beginning of FY 2014. However, the ANG has indicated an additional $8.26B of needs for modernization and recapitalization of the ANG aircraft fleet and associated equipment in its *2013 Weapons Systems Modernization Priorities* book.

The Marine Corps Reserve (USMCR) reflects a 13.3 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 2014 Reserve Component Equipment Shortages

Reserve Component	Requirements ($M)	On-hand ($M)	Shortage ($M)	Shortage (% of Reqd $s)
ARNG	115,511.2	*	*	*
AR	31,400.6	*	*	*
USMCR	6,711.0	5,818.0	893.0	13.3%
USNR	9,102.7	8,249.1	853.6	9.4%
ANG	49,811.9	47,071.9	2,740.0	5.5%
AFR	25,467.0	23,357.5	2,109.5	8.3%
USCGR	52.8	40.5	12.3	23.2%

Note: Requirements, on-hand, and shortage entries are total equipment value, excluding substitutes.
* ARNG and AR shortage values could not be determined based on the data provided.

IV. Equipment Procurement

Chart 1-3 shows funding levels from RC procurement sources for FY 2009–FY 2015. The FY 2015 funding does not include any NGREA or Congressional additions, since those funding amounts are not established until after the publication of the FY 2015 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
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			3.2	16.7		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			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			73.7	183.4		792.1	
	NGREA	250.0	137.6	69.0	70.0	250.0	68.2	844.8	
	Total	**4,607.4**	**1,809.3**	**93.5**	**217.5**	**1,048.7**	**163.4**		**$7,939.8**
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	320.3	145.0	63.0	75.0	315.0	75.0	993.3	
	Total	**3,767.8**	**909.5**	**71.5**	**269.2**	**624.5**	**212.1**		**$5,854.7**
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	417.0				377.6		794.6	
	NGREA	460.0	240.0	120.0	90.0	455.0	130.0	1,495.0	
	Total	**2,489.1**	**851.4**	**139.2**	**209.7**	**1,100.0**	**448.5**		**$5,238.0**
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	247.0				40.0		287.0	
	NGREA	315.0	175.0	60.0	65.0	315.0	70.0	1,000.0	
	Total	**2,850.1**	**606.1**	**124.5**	**318.0**	**641.4**	**824.1**		**$5,364.3**
2015	President's Budget P-1R Submit	1,869.5	591.2	65.3	149.4	169.2	322.0	3,166.6	
	Congressional Adds to AC Accts for RC								
	NGREA								
	Total								**$3,166.6**

Note 1: The above figures do not include Ammunition procured for the RC.
Note 2: USNR figures include USMCR aircraft procurement funds.
Note 3: 2011-2013 NGREA reduced by $16.9M FY 2013 Sequestration Reduction.
Note 4: 2015 Congressional Adds and NGREA values will not be available until 2015 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)

The past decade of conflict has forged the ARNG into an operational force capable of rapid and effective employment at home or abroad. The ARNG of 2013 is the best-equipped force in its long history. ARNG equipment on-hand levels have increased from 77 percent just four years ago to 91 percent today.

The ARNG's top equipping focus areas are:

1. **Modernize the ARNG helicopter fleet:** The aviation modernization effort is generally on track. The modernization of the ARNG UH-60 Blackhawk fleet is of concern, being the oldest in the Army. The H-60 series modernization is delayed by budget reductions and slowing cascades from the AC. CH-47D conversion to CH-47F is fully funded. The ARNG AH-64D fleet will be Block II-pure in FY 2017.

2. **Modernize the ARNG tactical wheeled vehicle fleet:** Tactical wheeled vehicles (TWV) have seen dramatic increases to modernized equipment on-hand levels since 2001, with 82 percent of the TWV fleet considered modern in 2013.

3. **Procure engineer equipment to fill shortfalls in modernization equipment:** Equipment shortfalls due to modernization levels of legacy equipment include general engineering equipment consisting of firefighting, support, and construction equipment.

4. **Maintain the ARNG to no less than 80 percent of Critical Dual Use equipment on-hand:** Critical Dual Use (CDU) equipment items are those Army items determined critical to the support of homeland defense and Defense Support of Civil Authorities missions. Current CDU equipment on-hand levels are at 92 percent, an increase from 65 percent at the time of the 2005 Hurricane Katrina response.

5. **Improve the ARNG command and control capability by focusing on fielding Army mission command systems to ARNG brigade combat teams:** Joint Capabilities Release–Blue Force Tracker (JCR-BFT) is a key situational awareness and command and control system. Currently, the JCR-BFT vehicular system is only being field to deploying units at reduced authorizations.

6. **Build 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 neither designed nor equipped to provide a safe, environmentally-friendly workplace, capable of meeting the demands of the Army's two-level maintenance doctrine to support and maintain a modern and complex, up-armored vehicle fleet.

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 and Defense Support of Civil Authorities missions.

The Army Reserves' top equipping focus areas are:

1. **Obtain affordable and cost-effective equipping solutions:** Over the past several years, the Army has greatly improved the compatibility and modernization of Army Reserve equipment. However, some units will continue to have legacy equipment. While the Army Reserve has explored initiatives to mitigate these compatibility differences for deploying units through internal cross-leveling during pre-mobilization preparations,

redistributing equipment is not an affordable or cost-effective solution since it consistently consumes limited financial resources.

2. **Resource and sustain critical equipment and support infrastructure to maintain the Army Reserve as part of an operational force:** For the Army Reserve to remain a ready and operational force, it must be funded and equipped appropriately. A lack of adequate resources risks the Army Reserve's ability to conduct effective, timely, sustained operations.

3. **Refine equipping strategy to support homeland defense (HD) and Defense Support of Civil Authorities (DSCA):** The quality and quantity of Army Reserve equipment received enhances interoperability with joint, interagency, intergovernmental, and multi-national partners, in support of global operations. In addition, efforts to improve and sustain modernization of CDU equipment enables the Army Reserve to employ unique capabilities required to execute HD missions and serve as a lifesaving and life sustaining force for the Nation in response to DSCA missions.

4. **Reestablish Light Tactical Vehicle (LTV) recapitalization program:** A significant modernization shortfall is developing within the Army Reserve LTV fleet, including armor-capable and ambulance high mobility multipurpose wheeled vehicles (HMMWVs). The Army Reserve is projected to maintain the HMMWV within the LTV fleet through FY 2045. The absence of a recapitalization program to modernize the LTV fleet will generate a significant increase in sustainment costs and degrade readiness.

C. The United States Marine Corps (USMCR)

The Marine Corps Reserve is an integral element of the Marine Corps total force providing support to operations in Afghanistan, while concurrently sourcing combatant commander requirements for a variety of missions, easily transitioning from a strategic force to an operational force at the peak of readiness.

The Marine Corps Reserve's top equipping challenges are:

1. **Transition to the KC-130J Super Hercules:** Compatibility differences between the KC-130J and KC-130T are creating significant challenges in training, manning, and logistical support of the KC-130T. Accelerating the RC transition to the KC-130J is a priority for the Marine Corps Reserve.

2. **Procurement of the RQ-21A Blackjack Small Tactical Unmanned Aircraft System (STUAS):** The RQ-21A will provide the Marine expeditionary force a dedicated intelligence, surveillance, and reconnaissance system capable of delivering intelligence products directly to the tactical commander in real time. This program is still in low rate initial production with AC procurement beginning in FY 2014. The RC is scheduled to receive the RQ-21A at the end of the current fielding plan but falls outside of the Future Years Defense Plan. Lack of these systems creates a significant capability gap between RC and AC forces.

D. The United States Navy Reserve (USNR)

The Navy has established a seamless and fully integrated Total Force. The Navy Reserve is a force multiplier 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 Navy, senior leadership identifies RC requirements and priorities 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 deployed operations and is ready to surge forward in response to a request for forces from the Navy.

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

1. **Aircraft procurement (C-40A, E/A-18G, P-8A, and 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 (Coastal Riverine Force (CRF), Naval Construction Force (NCF), and Navy Expeditionary Logistics Support Group [NAVELSG]):** Achieving equipment compatibility with the AC is one of the Navy Reserve's top priorities. Procurement and upgrade programs, as well as Congressional funding additions, have improved RC equipment capability and compatibility. For the NCF, NAVELSG, and especially CRF units, the ability to fully fund equipment requirements remains a challenge. The most critical needs for Navy Reserve CRF continue to be acquisition of MK VI Patrol Boats and Riverine Command Boats for its squadrons.

E. The Air National Guard (ANG)

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 are among the current and future challenges the ANG faces.

The ANG's top equipping challenges are:

1. **Adequate funding for weapon system modernization efforts:** With the need to fully fund ongoing operations and continued pressure on defense budgets, obtaining adequate funding for both procuring new equipment and modernizing existing equipment continues to be a challenge. In its "*Air National Guard 2013 Weapons Systems Modernization Priorities*" book, ANG has identified $8.26B of capability shortfall needs for modernization and recapitalization of the ANG aircraft fleet and associated equipment.

2. **Sustaining legacy weapon systems:** The ANG operates and maintains the oldest aircraft in the Air Force. Overall, the average age of aircraft within the ANG is 25 years. The ANG's Weapon Systems Sustainment Working Group has identified maintenance needs that include procurement of new advanced support equipment to replace the obsolete equipment built with 1970s and 1980s technology, modern leak detection equipment,

satellite communications radio support capability, and new C-130 Isochronal Inspection Stands meeting Air Force safety standards.

3. **Adequate funding for dual-use capabilities to support DSCA and state missions:** ANG is concerned with its ability to satisfy requests to support DSCA and state missions with its dual-use equipment. Changes to unit missions, coupled with organizational changes to classic associations, have created a decrease in authorizations for ANG equipment, which decreases the ability to respond to requests to perform DSCA and state missions.

F. The Air Force Reserve (AFR)

The Air Force Reserve is fully engaged across the full spectrum of operations, providing the strategic capacity to respond to national crises and the day-to-day operational capability to maintain ongoing missions. In 2003, the AFR surged, with 23 percent of its force activated in response to 9/11 and support for Operation Iraqi Freedom, and again in 2010, with 12 percent of its Airmen activated to support Operation Enduring Freedom.

The AFR's top equipping challenges are:

1. **Defensive systems:** Aircraft upgrades are in the process now to fully integrate all defensive systems. The AFR's top priority unfunded shortfall is additional C-130 Large Aircraft Infrared Countermeasures (LAIRCM) to provide increased protection against advanced and emerging infrared missile threats.

2. **Data link and secure communications:** The AFR's list of modernization shortfalls stresses aircraft defense, safety, and data link communications. The AFR will continue to equip C-130s in FY 2014 with the Real Time Information in the Cockpit (RTIC) data link system. These are upgrades with ARC-210 and Situational Awareness Data Link (SADL) radios to provide crews with advanced secure line-of-sight (SLOS) and beyond line-of-sight (BLOS) communications situational awareness and the ability to be dynamically mission re-tasked.

G. The United States Coast Guard Reserve (USCGR)

The Coast Guard also performs global missions in support of DoD combatant command operational plans. The Coast Guard's primary expeditionary resources are the eight Coast Guard Port Security Units (PSUs) that operate under the Navy Expeditionary Combat Command and are often embedded within the Navy's Coastal Riverine Force. These Coast Guard PSUs are unique because they are principally Reserve-staffed units, consisting of only six AC personnel within a 150 total complement.

The Coast Guard Reserve's top equipping concern is the recapitalization and sustainment of Port Security Unit (PSU) weapons and communications:

1. **PSU weapon standardization – alignment with DoD and NATO:** Reserve program staff and capability managers are working towards a major weapons transition for PSUs. PSUs are currently issued the M16A2 rifle, which is no longer used or supported by DoD and provides severe logistical challenges while deployed in support of joint DoD and host nation operations. Similarly, PSUs must transition to the 9mm pistol to meet North

Atlantic Treaty Organization (NATO) weapons requirements and align with DoD components while deployed overseas.

2. **PSU communications equipment – compatibility with DoD forces:** Modernization and upgrades to communications equipment will ensure interoperability with DoD. Secure and non-secure data in the field is a required capability in modern military operations, and PSUs require the organic capability to transmit, receive, and process both unclassified and classified data.

Chapter 2
United States Army Reserve Components

I. Army Overview

A. Army Planning Guidance

As the Nation's senior Military Service, the United States Army has always been indispensable to the security of the United States. The Army is the only Military Service that is charged with and capable of conducting prompt and sustained combat operations on land. The deployment of U.S. Soldiers is an unambiguous symbol of national resolve and commitment. As the Army emerges from over a decade of war, it is aggressively adjusting to meet future security threats to the Nation.

Prevent, Shape, and Win frames the Army's role as part of the Joint Force. The Army *prevents* conflict and destabilizing activities through its credibility as a modern, combat-ready, globally-deployable force. The Army also *shapes* security conditions favorable to U.S. and allied interests. If prevention fails and shaping is insufficient, the Army remains ready to decisively defeat the enemy and *win* a campaign as part of the joint force.

The Army operates in the human domain. Soldiers seize, retain, and exploit the initiative to gain and maintain a position of relative advantage through simultaneous offensive, defensive, and stability operations. The two core competencies of Army forces are *combined arms maneuver* and *wide area security*.

Over the next several years, the Army will move to become a regionally-aligned force, with units *assigned* and *allocated* to combatant commands. Once complete, Soldiers will be even more responsive to theater security cooperation and contingency response requirements, deploying from the squad to joint task force level.

The year 2013 marks the 40th anniversary of the Total Force Policy. The Army will continue to seamlessly integrate the Active, Guard, Reserve, and Civilian components. Over the past decade, the Army National Guard (ARNG) and United States Army Reserve (USAR) transformed from a strategic reserve to an operational reserve. The Army remains committed to ensuring the Total Force is manned, trained, organized, sustained, equipped, and employed to support combatant command requirements.

(Adapted from *Army Strategic Planning Guidance 2013* and Army Doctrine Publication 3-0, *Unified Land Operations*).

B. Army Equipping Policy

The Army Equipping Guidance describes the strategic environment through 2016 and how it relates to equipping the force. The guidance explains how it is synchronized and nested with the Army Equipment Modernization Strategy and the Army Equipment Modernization Plan to achieve an Army that is versatile, tailorable, and affordable. It also tells how the Army will equip during the transition from the current Army Force Generation (ARFORGEN) model to the future force generation model, including the policy and goals for equipping the operational force, the

generating force, and the Reserve Components. It describes how the Army can redistribute equipment to achieve Equipment On-hand (EOH) equilibrium across the force and the means to get the most from every budget dollar. The underlying foundation of the guidance is to identify and minimize equipping risks and costs as the Army transitions from Afghanistan, through sequestration, toward regionally-aligned and mission-tailored forces.

The scope of the guidance includes the Total Army: the Active Component (AC) and the Reserve Components (RCs). It is a dynamic and flexible document that identifies the equipping challenges the Army faces and provides ideas and solutions for meeting those challenges. The guidance encompasses three lines of effort: equipping units for their missions, increasing readiness by redistributing equipment, and saving money.

1. Equipping Units for Their Missions

Equipping units for their missions is the main effort. Since 2006, the Army has used the ARFORGEN model (structured progression of readiness over time) to produce trained, ready, and cohesive units. It was, and for the immediate future will remain, the primary method for equipping rotational AC and RC units for deployment and contingency missions. The Army is developing a future force generation model that, in accordance with the *Army Strategic Planning Guidance 2013*, will sustain the Army's ability to provide a manned, trained, and equipped Total Force to meet the full range of current and emerging combatant commander requirements. It will enable the Army to better tailor a versatile mix of AC and RC capabilities and deploy them rapidly for unified land operations of various durations.

The guidance provides units increasing levels of equipment at critical equipping points based on their ARFORGEN phase or future force generation pool. It focuses on placing equipment into the hands of units. It also equips non-rotational units, such as the generating forces that train Soldiers, and it ensures that the RCs have equipment to support homeland defense (HD) and Defense Support of Civil Authorities (DSCA) responsibilities.

In accordance with Department of Defense Directive (DoDD) 1200.17, *Managing the Reserve Components as an Operational Force*, this line of effort equips the RCs with the operational capabilities and strategic depth required of an operational force. It ensures they will be "consistently and predictably equipped" and that the "priority for the distribution of new and combat serviceable equipment, with associated support and test equipment, shall be given to units scheduled for mission deployment or employment first, regardless of component."

2. Increasing Readiness by Redistributing Equipment

This supporting effort's focus is to move equipment we already own or will procure in the near-term to increase overall unit readiness. While the Army has just less than 90 percent of its Modified Table of Organization and Equipment (MTOE) equipment on-hand, at the individual unit level they either have too much or not enough. As the Army draws down in Afghanistan, it has to transition away from a theater-provided equipment model to a pre-positioned and training activity set.

Shortages must be filled at the lowest level, within units and installations when possible. Theater excess equipment can be given to redeploying units that serve as conduits for getting the equipment from theater to installations where it is needed.

The guidance also ensures continuing equipment paybacks to the RCs in accordance with Department of Defense Instruction (DoDI) 1225.06, *Equipping the Reserve Forces*. To date, the Army has reconciled approximately 78,200 pieces of equipment of the 85,000 transferred out of the RCs since 2003.

3. Saving Money

Our processes and policies must take into account the significant reduction in funding under which we must operate. Every dollar not spent wisely directly diminishes the opportunity to reduce risk elsewhere. Sequestration, higher than expected war costs in Afghanistan, and potential reductions in 2014 and beyond will reduce both the Operation and Maintenance and Procurement funding needed to keep our formations ready for their assigned missions.

The Army will focus on preserving as much of the budget as possible for force modernization and to achieve and sustain future capabilities. This means it must reduce second destination transportation costs, divest expensive older systems and identify which niche capabilities to preserve and which can be divested, and reduce excess, whose costs can dramatically impact readiness. We must get equipment distribution and redistribution right and at the lowest levels. Fixing shortages through internal redistribution is a priority. In all cases, decisions must be based on accurate knowledge of EOH.

Transparency is key. Accountability of equipment must be established and maintained through accurately and rapidly documenting inventories to enable 100 percent visibility. The challenge is to be able to trace procurement-funded equipment from the President's Budget request to delivery at the unit level. During Operation Enduring Freedom and Operation Iraqi Freedom/New Dawn, the Army lost the ability to track equipment deliveries to the RCs. Equipment could not be traced to a particular sourcing document. The Army has made significant headway in achieving transparency through a collaborative automated collection tool. The Army currently tracks 129 programs from FY 2009 to FY 2013 Reserve Component equipment procurements, provides RC funding and procurement data for annual budget exhibits, and submits semiannual equipment transparency reports to the Office of the Assistant Secretary of Defense, Reserve Affairs (OASD/RA).

C. Plan to Fill Mobilization Shortages in the RC

After more than 10 years of war, the Army finds itself in reasonably good condition, equipment-wise. As stated above, it has almost 90 percent of its MTOE authorizations. In 2013, the AC had approximately 91 percent of authorized equipment on-hand, the ARNG had approximately 91 percent, and the Army Reserve had approximately 86 percent. These percentages should improve as equipment is returned from theater, reset/repaired, and redistributed to units.

In conjunction with ARFORGEN and the future force generation model, and in compliance with DoDD 1200.17 and DoDI 1225.06, the Army continues to comparably equip the AC and RCs to meet mission requirements. The Army equips all forces based on their priority within the

Dynamic Army Resourcing Priorities List (DARPL). In addition, it ensures the RCs always have at least 80 percent of their Critical Dual Use (CDU) items. These are MTOE-authorized items determined critical to the support of HD and DCSA missions. This allows units to meet their HD and DCSA requirements when not deployed.

When ARNG units deploy, they take their MTOE equipment with them. This can create a shortage of CDU equipment within the state. To compensate, states have enacted emergency management assistance compacts (EMACs) with each other. In EMACs, states agree to support each other in the event of a natural or manmade catastrophe.

The Army ensures all units are equipped to accomplish their missions. When there are shortages, the Army implements innovative methods to ensure commanders have the right amount and types of equipment for training and use when deployed. A common method leverages Pre-deployment Training Equipment (PDTE) sets and Theater Provided Equipment (TPE).

The PDTE sets are maintained by the AC and pre-positioned at key Mobilization Force Generation Installations (MFGIs) in support of individual and collective training requirements prior to any AC or RC unit deployment. The PDTE sets consist of mostly theater-specific and very low density items that are otherwise not available to units. These sets remain at the MFGIs when the units deploy to ensure availability for the next training rotation and to reduce transportation cost.

When the units arrive in theater, they are issued TPE unique items. Maintaining TPE in theater minimizes the cost and friction of deploying the equipment back and forth with returning and deploying units and 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 USAR. As the operating tempo slows, the Army moves to a Boots-on-the-Ground:Dwell ratio of 1:2 for the AC and a Mobilization:Demobilization ratio of 1:4 for the ARNG and USAR. The strain on personnel will be reduced. Counterintuitively, however, the strain and wear on equipping will increase, due to increased need and use of 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. 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 Mobilization:Demobilization ratios, the Army is committed to ensuring that ARNG and USAR units are equipped to execute their HD and DSCA missions as well as their other operational requirements. To this end, Headquarters, Department of the Army (HQDA), ARNG, and USAR define, validate, and update the CDU equipment list annually, identifying those MTOE items necessary for the accomplishment of the ARNG and USAR 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 USAR always have the equipment necessary to meet domestic operational requirements.

The Army identifies the CDU equipment necessary for Army units and personnel to assist civil authorities in responses to natural disasters, acts of terrorism, and other manmade disasters as identified in national planning scenarios and gives recommendation to HQDA on what equipment should be in the Army CDU equipment list.

The following five topics describe the Army efforts to bring the ARNG and USAR 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 (AC, ARNG, and USAR), and demands for U.S. ground forces have required almost continuous operational use of the ARNG and USAR 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 USAR in the future and what policies governing this use will require modification to achieve more efficient mobilization and effective employment of ARNG and USAR forces. The Army has made significant progress in transforming the ARNG and USAR 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 USAR to ensure that we can deliver a sustained flow of trained and ready land forces to meet the challenges of the 21st century. The 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 Military Services to provide increased transparency of equipping the RC. Specifically, the Military 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 ARNG and USAR equipment through the acquisition process from procurement to delivery.

To implement these directives, two important steps were taken by all Military 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 RCs greater confidence that the equipment requirements developed in the budget formulation are 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 Military Services and is called the Equipment Transparency Report (ETR). In close coordination with the ARNG and USAR, HQDA prepares the ETR semiannually and then provides the report to 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 USAR, 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 online while maintaining full visibility for the ARNG and USAR.

Oversight of the transparency effort is maintained by a multi-component General Officer Steering Committee (GOSC) that meets quarterly and reviews 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 prepare the ETR for GOSC review and approval. IPT leadership maintains close working relationships with both OASD/RA and other DoD staff agencies.

The Army fully supports DoD's efforts to increase transparency for the RC and is in full compliance with all directives. The Army also continues its efforts to automate the data collection process and has made significant progress in that area. Along with supporting DoD's transparency efforts, the AC, ARNG, and USAR 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 Secretary of Defense, the Army will provide the bulk of the Defense Chemical, Biological, Radiological, and Nuclear Response Force for FY 2014 and beyond. The Army provides specific capabilities for DSCA 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 United States Northern Command's (USNORTHCOM's) DSCA mission in the event of a disaster.

The equipment used by the ARNG and USAR to conduct DSCA missions and, in the case of the ARNG state missions are dual-use equipment that comes primarily through Army base budget

procurement and commercial off-the-shelf (COTS) equipment procurement by the ARNG and USAR. It also includes equipment that has been cascaded from the AC to the ARNG and USAR.

Like AC units, as ARNG and USAR 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 emphasis on procurement and management of CDU items will help ensure that the necessary equipment is available for mission execution.

5. Reset

Reset refers to the Army's imperative to restore balance to re-deployed units in the areas of family, Soldiers, equipment, training, and facilities as units return from operational deployments. The AC and RCs conduct the reset process for 180-days and 365-days, respectively, within the Army's current ARFORGEN model. Units complete reset better prepared and equipped to engage in training for future operations.

Equipment reset is a task within the larger scope of the reset phase. When battle-stressed equipment returns from an overseas contingency operational deployment, it is repaired and refurbished at either the unit-level (field-level) or depot-level (sustainment-level) maintenance facilities. In the case of equipment classified as a non-recoverable battle loss, equipment is replaced via new procurement activities. The Army prioritizes equipment reset activities to ensure that units slated as next to deploy are equipped to meet their operational readiness requirements. The Army's operational readiness requirements ultimately drive equipment reset priorities.

As with the Active Component, RC equipment reset priorities are currently evolving as the Army simultaneously conducts a withdrawal of forces from Operation Enduring Freedom, restructures the force, and modifies the ARFORGEN model. Within the RC, ARNG units continue to support HD and DSCA missions, and the USAR is adapting to its newly specified role as an operating force and expanded Title 10 responsibilities to support DSCA and HD missions. With consideration given to the fiscally-constrained operating environment, the Army will continue to balance its equipment reset priorities concerning CDU items within MTOE units.

6. What We Bring to the Fight

The ARNG and USAR are full partners with the AC 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 USAR have undergone tremendous change in the past eleven 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 the RCs 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 USAR play an essential role in the National Defense Strategy. The ARNG and the USAR served alongside AC units in Iraq and they continue to serve along with AC units in Afghanistan. They serve in the Sinai and in the Balkans. The ARNG and USAR 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 USAR are operational components and they can continue to expect to serve together with 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 USAR units receive the same equipment as their AC counterparts when assigned similar missions.

The Army is also committed to fulfilling its DoDI 1225.06 requirements to replace ARNG and USAR equipment transferred to the AC. At the time of this publication, the Army had reduced the number of items it owes the ARNG and USAR from over 85,000 to approximately 6,800 pieces of equipment. To ensure transparency, any new requirements must be accompanied with a memorandum of agreement signed by both the AC and ARNG or USAR 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

- Modernize the ARNG helicopter fleet
- Modernize the ARNG tactical wheeled vehicle fleet
- Procure engineer equipment to fill shortfalls in modernization equipment
- Maintain the ARNG to no less than 80 percent of Critical Dual Use equipment on-hand
- Improve the ARNG command and control capability by focusing on fielding Army mission command systems to ARNG brigade combat teams
- Build essential field-level maintenance facilities to effectively repair, service, and maintain ARNG equipment

The Army National Guard (ARNG) supported overseas contingency operations (OCO) and domestic missions in FY 2013. ARNG state support included flood and hurricane response, winter storm and wildfire response, and search and rescue. Additionally, the ARNG provided support to the Department of Homeland Security, the Presidential Inauguration, and Customs and Border Patrol along the U.S. Southwest border. ARNG support to OCO included 13,602 Soldiers for Operation Enduring Freedom in Afghanistan, 5,584 Soldiers in Southwest Asia, 290 Soldiers in Kosovo, 499 Soldiers in Cuba (Guantánamo Bay), 611 Soldiers in Djibouti (Horn of Africa), and 546 Soldiers in Egypt.

Congress's continued support of Army procurement and the Army's continued utilization of the ARNG as an operational force have resulted in significant improvements to the ARNG equipment posture and increased equipment on-hand (EOH), Critical Dual Use (CDU) equipment, and the overall modernization levels. ARNG EOH was at 77 percent just four years ago. Today, the ARNG is at 91 percent. Overall, the current CDU EOH is 92 percent, an increase from 65 percent at the time of the Hurricane Katrina response in 2005. Additionally, efforts by Congress to modernize the total Army has resulted in dramatic increases to modernized EOH in the ARNG. Tactical Wheeled Vehicles (TWVs) and armored vehicles in particular have seen the most striking increases, with 48.2 percent of the TWV fleet and 47.1 percent of the armored vehicle fleet considered modern in 2001 compared to 82 percent and 99.8 percent modern (respectively) in 2013. In June 2013, adjustments made to the modernization "cut" levels of several equipment items resulted in the ARNG's overall EOH modernization percentage increasing from 70 to 85 percent in the current report.

By capitalizing on past investments, the ARNG is one of the best options available for our Nation to preserve military capability, capacity, and depth concurrently, while helping to decrease overall defense expenditures. The fiscal realities that we face afford the Congress and Department of Defense an opportunity to review what the ARNG has contributed over the past decade, but more importantly, where the ARNG will be ten years from now. Resources remain the principal reason the ARNG is an operational force, and will determine whether it stays that way. The ARNG has been able to achieve individual and unit proficiency with advance training in live and constructive exercises at the Army's premier training centers. In addition, designated resources have elevated the ARNG to a higher level of modernized equipment on-hand than at any time in its history.

a. Status of the ARNG as an Operational Force

The past decade of conflict has forged the ARNG into an operational force capable of rapid and effective employment at home or abroad. The ARNG of 2013 is the best-manned, best-trained, best-equipped, best-led, and most experienced force in its long history. This is a direct result of the resourcing and legal authorities that Congress has dedicated to this purpose over the past decade-plus of conflict. The ARNG has used those resources wisely, and is an operational force that provides capabilities and strategic depth to meet national defense requirements and state needs. The ARNG complements the Active Component, ensuring the Total Force remains capable of providing trained and ready forces in support of the Nation's security strategy. As an operational force, the ARNG is resourced, trained, ready, and utilized on a continual basis, conducting the full spectrum of military operations in all environments as part of the Total Force.

The ARNG today provides the Army strategic depth and an operational reserve with specialized expertise and civilian skills. More important, it provides experienced forces to satisfy the Nation's needs across the full range of military operations. The ARNG is currently structured for success. Preserving these options will require the combined efforts of the ARNG, the Army, and the Department of Defense to address the challenges of institutionalizing Total Force Policy and to determine the appropriate strategies and policies to ensure long-term viability of the operational ARNG.

The investment to maintain an operational force when compared to the strategic reserve the Nation had prior to 9/11 is quite modest. However, that investment has more than paid for itself in added responsiveness, flexibility, and readiness resident in a Reserve Component (RC) where 84 percent of the personnel serve in a traditional part-time status. The remaining personnel are either Active Guard and Reserve (AGR) or Technicians. The training and equipment used to ready the ARNG for overseas service paid dividends here in the United States. Preparation and training for war has made the ARNG extremely effective in responding to domestic emergencies. As an operational force, the ARNG will continue to be poised to support OCO, DoD and state missions in the United States, and the State Partnership Program in numerous countries around the world.

b. Operational ARNG—Defense Support of Civil Authorities and State Missions

In 2013, the ARNG performed state missions in response to significant wildfires in Colorado, Wisconsin, Arizona, Nevada, Minnesota, Idaho, New Mexico, South Dakota, and Tennessee that resulted from below-normal rainfall. During FY 2013 (as of June 2013), the ARNG performed state missions in response to more than 179 disasters, including Hurricane Sandy. Table 2-1 below provides further detail.

Table 2-1. Defense Support of Civil Authorities and State Missions

Event Type	Event Amount	Event Type	Event Amount
Key asset protection	2	Search and rescue	44
Law enforcement support	3	Water support	7
Winter storm response	10	Tornado	1
Flood	14	Explosive ordnance disposal (EOD)	7
Special event	11	Southwest border	1
Fire	25	Severe weather	1
Civil Support Team (CST) response	87	Counterdrug	2
Hurricane—Tropical Storm	3	Other	4

i. Chemical, Biological, Radiological, Nuclear (CBRN) Enterprise

The ARNG comprises 66 percent of the entire DoD CBRN Response Enterprise (CRE) (approximately 12,402 ARNG Soldiers and 1,558 Airmen). Based on the recommendation of the 2010 Quadrennial Defense Review, DoD stood up ten National Guard Homeland Response Forces (HRFs). HRFs are joint task forces composed of both ARNG and Air National Guard (ANG) personnel. Each HRF consists of a mission command element, CBRN Task Forces, and Chemical, Biological, Radiological, Nuclear, and High-yield Explosive [CBRNE] Assistance Support Elements, totaling 577 Soldiers. The HRFs are regionally aligned by Federal Emergency Management Agency (FEMA) Region with one in each region to provide a fast, nationally-coordinated CBRN response capability. Two HRFs were operational at the end of FY 2011 and the remaining eight conducted validation in FY 2012. HRFs provide life-saving capability within a 6–12 hour response time and mission command for other CRE elements in their area of operations. The HRF is designed to provide mission command for three National Guard CBRNE Enhanced Response Force Packages (CERFPs). The CERFP is the primary life-saving capability of the National Guard elements of the CBRN Response Enterprise. Each HRF has an embedded CERFP capability called a CBRN Task Force. 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 2,029 highly trained Soldiers. When directed by USNORTHCOM, C2CRE-B conducts CBRN operations to provide lifesaving, command and control (C2), and logistics capabilities for follow-on forces within the USNORTHCOM area of responsibility to execute DSCA missions in response to CBRN incidents to save lives and minimize human suffering.

ii. ARNG Division Headquarters, Domestic All-Hazards Response Team (DART), Coordination Cell (DCC)

The USNORTHCOM Concept Plan requires the establishment of DCCs. ARNG Division Headquarters facilitates the states' ARNG domestic all-hazards response, beginning at the lowest state echelon. This requires identifying the "Essential 10" capabilities and aligning them with the existing state all-hazards plan to fill capability-based gap requirements. The Divisions provide

unity of command and effort that can support a state with individual and staff augmentation up to the full breadth of an Army Division and a two-star general Dual Status Commander.

The DART mission is split up into DART East and DART West regions of the United States. Each region has a primary and reinforcing DART DCC with 20 Full Time Manning (FTM) for the primary and 10 FTMs for the reinforcing, which are housed within the Division Headquarters. The DCC consists of an officer-in-charge and a team of planners and operations personnel to mirror that of a Division G5 section. The DART Coordination Cells are vital to the DART concept by providing the adjutants general with joint operational flexibility for augmenting their existing forces with modular, scalable, and affordable force packaging capabilities. The DCCs utilize the DoD reporting systems as operational planning tools to generate state National Guard force packages to aid in mitigating identified state capability gaps during crisis action planning. The DCCs have continued to meet expectations within the Chief, National Guard Bureau (CNGB) and Director, Army National Guard guidance as they demonstrate their value in annual National Level Exercises and pre-planned National Special Security Events. Most notably, DCCs facilitated response preparation and coordination between affected states and the National Guard Coordination Center during natural disasters to include hurricanes Irene, Isaac, and Sandy.

c. Operational ARNG—Support to Security Cooperation and Building Partner Capacity

In 2013, the Army National Guard provided approximately 12,278 Soldiers to support 63 military exercises in 73 countries. The ARNG's unique dual mission capability combined with Soldiers that possess a range of valuable professional skills and expertise acquired as civilians promotes a well-rounded Soldier with a larger set of skills to solve complex problems. The National Guard Bureau's State Partnership Program (SPP) includes 65 partnerships with a total of 71 partner countries. Twenty-seven SPP partner countries have deployed alongside Guard Soldiers in Iraq and Afghanistan. This program is a vital element of the Army's security cooperation strategy as it promotes security cooperation activities for military-to-military training, disaster response, border and port security, medical, and peace enforcement operations.

2. Status of Equipment

The ARNG continues to manage available resources effectively to support both DoD and state missions. Total EOH is currently 91 percent, with 84 percent of Modified Table of Organizational Equipment (MTOE) equipment available to the governors due to mobilizations and deployments. This EOH percentage does not include Table of Distribution and Allowances (TDA) requirements that are critical to military occupational specialty producing schools, Civil Support Teams (CSTs), pre-mobilization training, states' Joint Force Headquarters, and other ARNG missions. Additionally, some TDA equipment is critical in performing HD and DSCA missions. TDA EOH percentage is currently 64 percent.

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) increased from 69 percent to 91 percent in FY 2013. The ARNG CDU EOH, a subset of MTOE equipment, increased from 65 percent to 92 percent during this same period. This continued improvement in ARNG EOH is essential to ensuring the ARNG is capable of fulfilling its missions. As in the past, ARNG EOH

percentages will continue to be affected by changing MTOEs and the modernization of equipment; however, the net result will be a more ready and modern reserve force prepared for utilization as an operational force.

a. Equipment On-hand

The ARNG aligned itself to continue supporting the Army's full-spectrum Army Force Generation (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, HD, DSCA missions. Over the past year, the ARNG has received over 74,000 new items of equipment.

i. Table of Distribution and Allowances Unit Equipment

ARNG TDA units contribute to domestic response missions. Such units include state 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 other 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 that is not excess presents a challenge to the ARNG and results in lower EOH levels of MTOE equipment available to the "donor" unit and possibly the state and territory. 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. However, increased quantities of EOH over the past few years have correspondingly decreased the need to cross-level equipment to mobilizing units to meet deployment requirements. This is supported by the reduction in the number of equipment items cross-leveled for mobilization from 2,917 in 2012 to 387 in 2013.

iii. DoD Instruction 1225.06—Equipment Transfers to Contingency Operations

The ARNG continues to track the equipment transferred over the past decade from units re-deploying out of theater to units deploying to theater to support various urgent war fighter needs. As HQDA staff identifies equipment requirements, ARNG will continue to coordinate with HQDA staff to best meet the needs of the combatant commanders and the Army. DoDI 1225.06, *Equipping the Reserve Forces* (signed May 16, 2012), provides greater transparency and traceability controls over RC equipment transfers. This includes transfers from one component to another, transfers within a component, as well as equipment inducted into maintenance facilities. Additionally, the instruction provides enhanced reporting requirements to provide enhanced 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 Army Reserve (AR) equipment in accordance

with DoDI 1225.06. The ARNG continues to monitor replacement requirements established since 2003 and approved by the Secretary of Defense. Through regularly scheduled Integrated Product Team meetings, consisting of members from HQDA, Army Materiel Command, ARNG, and Army Reserve, 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 2014 is provided in *Table 2.* An increase in manufacture and recapitalization programs through FY 2013 alleviated the historical issue associated with aging equipment. 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, the average age of equipment should 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 neither designed nor equipped to provide a safe, environmentally-friendly workplace, capable of meeting the demands of the Army's two-level maintenance doctrine to support and maintain a modern and complex, up-armored vehicle fleet. 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

Continued funding of the ARNG Surface Depot Maintenance Program is key to maintaining the readiness of the ARNG fleet. As an integral part of ARNG's sustainment activities, the depot overhaul and rebuild programs sustain ARNG EOH and extend the service life of its fleet. ARNG sustainment activities thereby decrease operational tempo spending. The current ARNG Depot Maintenance Program funding level is $233.1M. This is 59.2 percent of the ARNG critical requirement of $394M in FY 2014. Planned reductions in the Depot Maintenance program in FY 2014 and across the FY 2015–FY 2019 budget will significantly affect the program.

iii. Home Station Reset

Under the Home Station Reset program in FY 2013, the ARNG continued to restore equipment returning from Kuwait and Afghanistan to Technical Manual 10/20 standards within 365 days of the unit's return to home station. In FY 2013, the ARNG Home Station Field Level Reset Program (subset of Home Station Reset) completed the reset of 136,340 pieces of equipment.

iv. Automatic Reset Induction (ARI)

Units redeploying from theater are required per HQDA to induct 100 percent of identified ARI equipment items into Sustainment Maintenance prior to redeployment to the continental United States (CONUS). The return of the equipment inducted into ARI is critical for the National Guard to keep a high state of readiness and accomplish the National Guard's state missions.

d. Overall Equipment Readiness

Army 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 2013 has filled only 75 percent of the ARNG's established surface maintenance technician requirements and 70 percent of air maintenance technicians.

B. Changes since the Last NGRER

1. Preserving the Operational Army National Guard

The Army Strategic Planning Guidance states the Army's determination to advance the capabilities gained over the last 11 years and leverage capacity and capabilities of the Total Force—Active, Guard, Reserve, and Civilian—ensuring that both the operational and generating forces are optimized and aligned to support DoD and Army strategic priorities. To that end, the Director, ARNG indicated his determination to maintain the ARNG as an operational force through the Army National Guard Strategic Imperatives, September 2012. These essential goals will shape the ARNG over the next several years as we enter a period of constrained resources. These imperatives will help to ensure the ability to provide ready forces to meet the needs of the Nation and our governors.

A key component of maintaining an operational reserve is forecasting regular use of the force through a progressive readiness model, such as ARFORGEN, which prepares Soldiers and units for deployment every five years. This gives Soldiers, their families, and civilian employers the predictability they need to plan their civilian lives and careers while developing critical military skills exercised through tough, realistic training, and operational employment. Additionally, the ARNG must continue to field, sustain, and train on modernized equipment. Future procurement and sustainment programs must ensure that units are trained, ready, and modernized concurrent with the AC. Equipping and modernizing the ARNG on par with the AC will ensure readiness, support an operational force, and promote interoperability.

The Total Army adheres to one standard. Whether a unit is in AC, ARNG, or Army Reserve, the Army priority for equipping is to units scheduled for mission deployment or employment first, regardless of component. If not identified as a next to deploy or employ force, the challenge for RC units within a 5-year force generation cycle is sufficiency of resources to fully realize progressive readiness. These units are consistently and predictably equipped but less frequently than the AC, based upon the lower priority behind critical and essential mission requirements. If the Army is to preserve options for the future and provide the capabilities needed for future challenges, the operational ARNG must see continuous use in ongoing operations requiring rotational support, contingency, or security cooperation, and must be equipped and modernized on par with the AC.

2. Transparency

The Army continues process improvement to provide transparency as it relates to the component-level visibility, traceability, and tracking of equipment funding, production, delivery, and fielding. A key component of the Army's effort will be to establish an automated transparency process. The Army expects the development and implementation of Item Unique Identification (IUID) coding and system implementation to provide the automated means necessary to trace delivery of equipment to the funding year and appropriation from which it was resourced. Once fully operational, IUID will be the final piece necessary to enable information sharing between various systems in the acquisition process. The IUID system is currently scheduled to become fully operational by 2017.

3. Significant Major Item Shortages

Table 1 and *Table 8* provide equipment inventories, shortfalls, and modernization requirements for the ARNG at the end of FY 2017. 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 Federal and domestic roles, UH-60 Blackhawk modernization, general engineering equipment, chemical/biological protective shelters (CBPS), semitrailers, and high mobility multipurpose vehicle (HMMWV) ambulance shortages are high priorities.

C. Future Years Program (FY 2015–FY 2017)

The cumulative effect of sequestration and the current fiscal environment will challenge the Army to consistently and predictably provide equipment to the RC. Army procurement funding is expected to trend downward across the Future Years Defense Program (FYDP). Currently, the ARNG is programmed to receive approximately $5.2B in FY 2015–FY 2017 in future years base funding; these figures include $1.56B in FY 2015, $2.0B in FY 2016, and $1.65B in FY 2017. These figures are inclusive of the Army equipment procurement appropriation accounts and do not include pay and allowances or research and development and are subject to change with the FY 2015 President's Budget submission.

1. Equipment Requirements

Table 1 provides projected FY 2015–FY 2017 major equipment inventories and requirements.

2. Anticipated New Equipment Procurements

a. Base Budget

Table 3, Service Procurement Program–Reserve (P-1R), provides the list of programmed ARNG equipment procurements in fiscal years 2015–2017.

b. NGREA Procurements

National Guard and Reserve Equipment Appropriation (NGREA) funding has been used to successfully mitigate key ARNG shortfalls in equipment and modernization efforts. FY 2013 ARNG NGREA funding has allowed the investment of more than $58M in aviation, engineering, and logistics systems. In addition, $79M of NGREA funding was used to procure systems that enhance HD and DSCA missions. The ARNG also has invested $182M of NGREA funding for the procurement of simulators and training systems that support both individual and collective training. Although these purchases do not include all of the procurements that were made possible by FY 2013 NGREA funding, it does reflect the ARNG's focal funding areas.

3. Anticipated Transfers from AC to RC

Table 5 provides a list of equipment the AC projects to cascade to the ARNG. The AC has received a large influx of newly procured equipment, especially for AC units rotating overseas. In addition, as forces are reduced, equipment requirements will also be reduced. It is anticipated that as force structure changes are implemented, new as well as excess AC equipment will allow the AC to transfer a portion of their older equipment to the ARNG to fill shortages and replace equipment that has been categorized as obsolete. The Army anticipates that it will cascade drawdown equipment to the ARNG through FY 2016.

4. Funding for New and Displaced Equipment Training

New Equipment Training (NET)/Displaced Equipment Training (DET) funding is dependent on the quantity of new equipment scheduled for fielding to the ARNG. In FY 2013, the ARNG received $67.7M in funding for NET/DET events and activities. This amount was sufficient to provide pay and allowances for soldiers required to attend NET/DET events and activities. The ARNG will be fielding the Global Combat Support System-Army (GCSS-A) in fiscal years 2015–2017. Any significant decrement to ARNG NET funding levels will significantly increase risk in the ARNG's ability to support required NET and the ability to fund GCSS-A. The ARNG must complete fielding of GCSS-A by FY 2017 to meet the 2008 National Defense Authorization Act (NDAA) requirement for CNGB to validate delivery of new equipment.

5. ARNG Equipping Strategy

The ARNG's goal is to ensure that Soldiers and units always have the required equipment to execute assigned missions whether they are progressing through ARFORGEN force pools, non-rotational units, in the Generating Force, or conducting HD and DSCA missions. The Army Guard will continue to equip units in accordance with ARFORGEN Aim Points (APs) based upon the resourcing priorities and the DARPL. APs are targeted equipment levels based upon the ARFORGEN cycle. The APs reflect Army priorities and enhance the ability of leadership, resource managers, and force providers to make accurate and timely decisions to mitigate risk on

manning, equipping, and sourcing of units. Success is measured by the ability of the ARNG to meet equipping goals of units based on each unit's mission and priority.

The AC, ARNG, and AR attempt to ensure all units are consistently and predictably equipped; however, none of the components have enough equipment to fill all requirements all the time. Factors, such as slow production rates, reset issues, funding limitations, requirements approved in advance of resourcing, or deliberate Army decisions to procure less than the Army Acquisition Objective, can result in shortages. These shortages may, in turn, result in units not achieving required equipment readiness levels until they are close to deployment. The ARNG will attempt to mitigate these shortages prior to mobilization through redistribution or cross-leveling of equipment. This allows the ARNG to leverage distribution of selected items to manage shortages better and maximize capabilities in an affordable manner. The ARNG will strive to meet the ARFORGEN APs for all equipment, but there will be circumstances when tailored equipping solutions will be implemented (e.g., emergency response units, ensuring availability of CDU equipment items).

6. Equipment Shortages and Modernization Shortfalls

While modernization levels overall are good, and within one percent of AC levels, there are nevertheless areas of concern. Modernization concerns include the Army National Guard's UH-60 Blackhawk fleet, which is the oldest in the Army. Equipment shortfalls include the CBPS and general engineering equipment consisting of firefighting, support, and construction equipment.

The equipment item listings in each of the following Budget Operating System (BOS) areas are not an all-inclusive ARNG equipment shortage list but are groupings of those shortages most critical to the ARNG for FY 2015. Such systems fulfill the Army's combat, combat support, and combat service support missions. BOS narratives are provided below. The narratives with BOS tables contain select items of equipment with fill percentages below 90 percent.

a. Maneuver Budget Operating System

The Maneuver BOS is comprised of a variety of combat systems. Abrams Tanks, Bradley Fighting Vehicles, Stryker Vehicles, and Long Range Advanced Scout Surveillance Systems (LRAS3) are among the highlighted systems in this BOS. The projected status at the end of FY 2014 shows the Abrams Tank at 100 percent EOH fill with two Armor Brigade Combat Teams (ABCTs) upgraded to the System Enhanced Package variant, and five ABCTs and three Tactical Combat Formation Combined Arms Battalions upgraded to the Abrams Integrated Management Situational Awareness variant. The Bradley Fighting Vehicles are at 96 percent fill, with five of seven ABCTs programmed for upgrade to the Operation Desert Storm – Situational Awareness variant, and two additional ABCTs programmed for upgrade to the A3 variant; the Stryker Vehicles are at 88 percent fill; and LRAS3 are 100 percent fielded to the ARNG.

b. Soldier Budget Operating System

The Soldier BOS is comprised of night vision, thermal weapon sights, small arms, and weapon support items. This portfolio enables Soldiers in our formations to gain and maintain overmatch against current and potential adversaries. All systems in this BOS are fully funded in the current budget. The ARNG has 100 percent of authorized night vision and Javelin in the Block 0 and

Block 1 capability configurations. The ARNG has 99.1 percent of required thermal weapons sights on-hand, and Improved Target Acquisition Systems are filled to 91 percent.

c. Air and Missile Defense Budget Operating System

Air and Missile Defense (AMD) remains an Army core function, vital to the Army's core competencies of combined arms maneuver and wide area security. More significantly, the Army is the only Military Service designated to conduct both air and missile defense in support of joint campaigns (see Table 2-2).

Table 2-2. Air and Missile Defense Budget Operating System

System	Required Quantity FY 2015	On-hand Quantity FY 2015	Percent Fill	Funding Shortfall
Air and Missile Defense Planning and Control System (AMDPCS)	4	2	50%	$24M
Improved Sentinel Radar	82	82	100%	$0
Air Defense Airspace Management System (ADAM)	81	72	87%	$12M

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Today, ARNG AMD units support the National Capital Region's Integrated Air Defense System that protects our Nation's capital and also provide manning for Ground-based Midcourse Defense systems deployed in Alaska, Colorado, and California to deter and defeat ICBM attacks on our Nation. Both AC and ARNG AMD units regularly protect designated special security events such as Olympic Games or political and international summits hosted in the United States. Acquisition of new tactical systems and modernization of currently fielded assets continues to improve and integrate AMD systems into the Ballistic Missile Defense System architecture.

d. Aviation Budget Operating System

The Aviation BOS consists of all ARNG rotary-wing, fixed-wing, and unmanned aircraft systems. The BOS modernization effort generally is on track with the exception of the H-60 series; budget funding reductions will decrease H-60L cascades from the AC (see Table 2-3). The ARNG operated 438 H-60A, 304 H-60L, and 81 H-60M in FY 2013, with scheduled H-60A divestment in FY 2026 and H-60M buyout forecasted for FY 2027. The ARNG AH-64D fleet will be Block II-pure in FY 2017. CH-47D conversion to CH-47F is fully funded. All C-23 aircraft will be divested from the ARNG inventory in 1st quarter FY 2014. Initiatives such as bulk procurement of Common Tool Kits fill long standing shortages and illustrate aviation ground support equipment (AGSE) modernization.

Table 2-3. Aviation Budget Operating System

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Funding Shortfall
UH-60 Blackhawk (Modernization)*				
UH-60L Model*	450	304	67%	
UH-60M Model*	106	121	114%	$708M
UH-72A Lakota*	212	212	100%	$0
AH-64D Apache	192	177	92%	$376M
CH-47F Chinook (Modernization)*	75	83	110%	$0
AGSE (54 line items)*	15,674	10,195	65%	$33.5M

* Indicates CDU item.

e. Fire Support Budget Operating System

The Fire Support BOS consists of all fire support and related systems. The ARNG is fully funded for "shoot" systems (cannons, howitzers, and rockets). Rocket systems are fully funded for improved armor cab, enhanced fire control capability, and enhanced long range communications. Towed cannons are fully funded for digitization (to M119A3) and additional M777A2s Howitzers are being fielded as Army brigade combat teams (BCTs) undergo reorganization to the BCT 2020 construct. The M1200 Armored Knight and Lightweight Laser Designator Rangefinder (LLDR) will complete fielding by FY 2015 with LLDR modernization beginning in FY 2016. The Q-53 Firefinder Radar and Q-50 Lightweight Counter-mortar Radar (LCMR) represent the key challenges to full readiness for this portfolio. Legacy radars (Q-36 and Q-37) are fielded to 85 percent of authorization; fielding of the Q-53 is not expected to begin until FY 2015 due to Full Materiel Release challenges. The Q-50 has entered full-rate production, but recent budget reductions have delayed the likely full-fielding date until early in the next decade.

f. Mission Command Budget Operating System

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. Joint Capabilities Release–Blue Force Tracker (JCR-BFT) is the key situational awareness and C2 system, which links communication devices, sensors, vehicles, rotary-wing aircraft, and weapons platforms in a seamless digital network to provide a clear, continuous, and common picture of the battlefield. ARNG is fielding the JCR-BFT Tactical Operations Center system and a vehicular mounted system. Currently, JCR-BFT vehicular system is only being fielded to deploying units at reduced authorizations in accordance with a Force Feasibility Review known as the Key Leader Option. This number is significantly lower than MTOE authorizations (see Table 2-4).

Table 2-4. Mission Command Budget Operating System

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Equipment Shortfall
Blue Force Tracker (veh) C18378	23,257	14,466	62%	$231M

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

The NBC Force Protection BOS consist of systems to support chemical, biological, radiological, and nuclear activities. The CBPS system is a CDU item used for homeland response missions. Delivery of 8 systems for the ARNG is scheduled for FY 2014 (see Table 2-5).

Table 2-5. NBC Force Protection Budget Operating System

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Equipment Shortfall
CBPS*	289	8	3%	$281M

* Indicates CDU item.

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

The IEW BOS consists of a variety of systems, including the Prophet. The Prophet system includes one control vehicle and two or three sensors depending on the unit type. The Prophet equipment shortfall is due to unapproved funding for Prophet fielding teams, delayed Prophet sensor production and retrofit schedule, and delayed CONUS fielding schedule due to theater priorities (see Table 2-6). Prophet system production is fully funded with fielding complete in FY 2016. These systems are critical for maintaining and developing the highly-perishable signals intelligence (SIGINT) skills associated with SIGINT Analyst and Crypto logic Linguist occupational specialties.

Table 2-6. IEW Budget Operating System

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Equipment Shortfall
Prophet Control Vehicle	34	6	18%	$8.9M
Prophet Sensor	75	15	20%	$84.0M

i. Mobility Budget Operating System

FY 2014 EOH quantities comprise a mixed fleet of new-build and legacy engineer systems. Family of Boats and Motors is currently under contract with fielding taking place in FY 2014–FY 2016. The Water Well Drill Rig has been fielded with two systems being sent to the Afghanistan and African theaters in support of combatant commander operational needs. The ARNG contains 100 percent of the force structure for the Water Well Drill Rig and is currently working through either a payback plan from HQDA or possible retrograde from theater. Mobility systems include countermine and bridging systems. Shortfalls exist due to modernization of equipment, not shortages of EOH. The ARNG currently contains approximately 40 percent of all engineering force structure, much of which can directly support civil support and disaster relief missions. The Mobility BOS utilizes a mix of programmed funds and NGREA (see Table 2-7).

Table 2-7. Mobility Budget Operating System

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Equipment Shortfall
Water Well Drill Rig	6	4	67%	$4.0M
Zodiac 15 Passenger Boats*	375	131	35%	$4.6M
Outboard Motor Gasoline: 40 Brake Horsepower (BHP)*	122	0	0%	$2.2K
Outboard Motor Gasoline: 35 HP Silenced Waterproofed*	365	67	18%	1.3M
Armored Vehicle Launched Bridge (AVLB)	102	72	70%	$9.0M
Medium Mine Protected Vehicle (MMPV) Type I	205	58	28%	$102.0M

* Indicates CDU item.

j. Combat Service Support (CSS) Sustainment Budget Operating System

The CSS Sustainment BOS consists of medical, fuel, water, maintenance, and food systems. Recent utilization of FY 2012 and FY 2013 NGREA funding improved the on-hand posture of these vital capabilities; however, the ARNG EOH is below 80 percent for Multi-Temperature Refrigerated Container Systems (MTRCS), Assault Kitchens, and 2K Water Tank-Racks (HIPPOs) (see Table 2-8). These sustainment systems add vital capabilities to ARNG units conducting both combat and domestic operations.

Table 2-8. CSS Quartermaster, Ordnance, and Medical Systems

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Equipment Shortfall
2K gal. Water Tank-Rack (HIPPO)*	660	483	73%	$23M
Multi-Temperature Refrigerated Container System*	470	174	37%	$32M
Assault Kitchen*	1,000	282	28%	$30M

* Indicates CDU item.

k. CSS Transportation Budget Operating System

The CSS Transportation BOS consists of Light Tactical Vehicles (LTVs), Medium Tactical Vehicles (MTVs), Heavy Tactical Vehicles (HTVs), and Tactical Trailers. The ARNG anticipates a requirement to recapitalize our 34-ton and 25-ton semitrailers. The ARNG also has a requirement to recapitalize Palletized Load Systems (PLS) to meet the Army standard of 50 percent modernization level by FY 2018. The ARNG PLS modernization level is currently 2 percent.

HMMWVs are critical command and control and transportation assets during domestic operations. The ARNG is excess of the FY 2018 HMMWV requirement (see Table 2-9). The HMMWV fleet consists of 40 percent up-armored HMMWVs and 31 percent of the HMMWVs that have been recapitalized for an additional 20 years of service. The ongoing Army Tactical Wheeled Vehicle (TWV) Reduction Study V will reduce the ARNG's overall HMMWV

requirements. The ARNG is purchasing 500 HMMWV Ground Ambulances with FY 2010 NGREA funding. The ambulances are projected to be fully fielded by June 2015. The ARNG MTV fleet is projected to be 95 percent Family of Medium Tactical Vehicles (FMTV), with only five percent substitutes by FY 2014, and 55 percent of the fleet will be the most modern up-armored models. The next critical Army Decision Point in FY 2014 will be to determine a recapitalization or replacement strategy for the first generation FMTVs that are approaching 15 years of service life. PLS shortfalls exist due to modernization of equipment, not shortages of EOH.

Table 2-9. CSS Transportation Budget Operating System

System	Required Quantity (FY 2015)	On-hand Quantity (FY 2015)	Percent Fill	Equipment Shortfall
Semitrailer: Flatbed 34-ton	4,349	3,755	86%	$42M
Semitrailer: Low-bed 25-ton	783	208	37%	$59M
Palletized Loading System (PLS)	1,767	1,799	100%	$384M
HMMWV Ground Ambulance*	1,690	1,372	81%	$112M

* Indicates CDU item.

D. Summary

Today, the ARNG faces a historic opportunity. The convergence of combat operations drawdown in Afghanistan, current defense strategy, and new defense-wide budgetary reductions are challenging our decision makers. They must consider difficult spending options that are required to be sustainable while keeping America safe and secure. The ARNG's integration into over 2,600 communities, across the United States and its territories, allows the Nation to maintain a robust military capability at the least possible cost to the taxpayer.

The ARNG provides a cost effective solution given our country's current fiscal constraints. It has repeatedly ensured our Nation's security and reaffirmed its value to the Army and the Nation through times of conflict, natural disaster and civil emergencies. Although EOH is at historically high levels, we must continue to equip and modernize the ARNG to keep it on par and on pace with the AC. This will ensure readiness, operational capacity, and promote interoperability. We must preserve the conditions that maintain the ARNG as an operational force.

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Air Defense							
Center Communications Operations: AN/TSQ-253(V)5	C17156	$1,625,489	3	3	3	3	4
Center Communications Operations: AN/TSQ-253(4)	C77942	$1,683,868	2	2	2	2	1
Center Communications Operations: AN/TSQ-253(V)2	C78192	$6,878,138	2	3	3	5	5
Center Communications Operations: AN/TSQ-253(V)3	C78135	$4,922,949	2	3	3	4	4
Center Communications Operations	C18033	$3,000,000	47	53	57	61	63
Command System: Tactical	C91673	$2,000,000	27	27	27	27	72
Computer: Tactical AN/GYQ-88	C77755	$62,808	106	149	149	149	149
Fire Unit Vehicle-mtd: Avenger	F57713	$1,090,277	264	264	264	264	264
Radar Set: Sentinel AN/MPQ-64	G92997	$3,500,000	60	67	67	67	78
Aircraft							
Aerial Scout Helicopter: OH-58D	A21633	$4,075,800	24	30	31	31	30
Airplane Cargo Transport: C-12D	A29812	$1,967,301	7	7	7	7	1
Airplane Cargo Transport: C-23B	A29880	$7,424,158	24	36	36	36	10
Airplane Cargo Transport: C-12F *	A30062	$3,068,422	23	23	23	35	93
CH-47F Improved Cargo Helicopter *	C15172	$30,000,000	75	119	149	167	159
Helicopter Advanced Attack: AH-64A	H28647	$10,680,000	0	0	0	0	20
Helicopter Cargo Transport: CH-47D *	H30517	$5,000,000	121	121	121	121	6
Helicopter Electronic Countermeasures: EH-60A	H30616	$5,544,861	1	1	1	1	0
Helicopter Light Utility (LUH) UH-72A *	H31329	$3,900,000	200	209	209	209	200
Helicopter Observation: OH-58A	K31042	$92,290	67	67	67	67	16
Helicopter Observation: OH-58C	H31110	$190,817	5	5	5	5	0
Helicopter Utility: EUH-60L	H31595	$6,529,538	2	2	2	2	0
Helicopter Utility: UH-60A *	K32293	$4,635,000	429	429	429	429	15
Helicopter Utility: UH-60L *	H32361	$4,855,000	284	284	284	284	22
Helicopter Utility: UH-60M *	H32429	$8,000,000	71	114	134	156	596
Helicopter Advanced Attack: AH-64E	H05006	$25,128,800	0	0	24	24	0
Helicopter Attack: AH-64D	H48918	$25,128,800	176	189	189	189	192
HH-60L: MEDEVAC Helicopter *	U84291	$7,908,000	13	13	13	13	0
Tactical Unmanned Aerial Vehicles System: Shadow	T09343	$2,000,500	31	31	31	31	33
Aviation							
Aircraft Data Rate Adapter (ADRA) Unit: CV-3885	A29082	$3,523	1	1	1	1	0
Forced Entry and Rescue Equipment Set: Aircraft Crash *	H88468	n/d	0	0	0	0	147
Helicopter Internal Cargo Handling System (HICHS) CH-47	H31079	$145,158	28	28	28	28	42
Launcher Rocket Aircraft: 2.75-inch 19-tube M261	L45131	$8,050	437	437	437	437	430
Launcher Rocket Aircraft: 2.75-inch 7-tube M260	L45199	$7,460	56	56	56	56	60
M279A1 Launcher Guided Missile Aircraft	Z05122	n/d	27	27	27	27	0

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Oxygen Service Unit Airmobile: 8-Bottles Max	N40783	$6,897	4	4	4	4	0
Peculiar Ground Support Equipment: Deployment Support Kit	P05012	$66,950	87	87	87	87	0
Sling Cargo Aerial Delivery: 500-lb Capacity Type A7A *	T76903	$86	236	236	236	236	188
Sling Cargo Aerial Transport: w/Multiple Leg Sling	T80571	$862	9	9	9	9	0
STABO Extraction Harness System	U16457	$494	9	9	9	9	24
Survival Kit Aircraft: Basic 4-Person	S72693	$1,174	807	807	807	807	990
Survival Kit Aircraft: (2-Man) Aircraft Modular Survival System (AMSS)	S72943	$898	235	235	235	235	462
Survival System, Aircraft Personnel	BB8056	$6,800	330	330	330	330	0
Tester: Pitot and Static Systems TS-4463/P *	T03597	$48,845	209	241	273	327	270
Tool Kit: Aircraft Crash Rescue *	L27293	$737	250	250	250	250	307
Trainer Flight Simulator: CH-47C	T00079	$1,250,000	1	1	1	1	0
Trainer: Composite Black Hawk	T04324	$2,300,000	2	2	2	2	0
Battle Command (Command and Control)							
Battle Command Common Services (BCCS) CPOF Stack AN/TYQ-146	B73507	$98,036	3	3	3	3	0
BCCS Short Stack Command System: AN/TYQ-146(V)2	B49350	$96,365	4	4	4	4	0
Command and Control System: AN/GYQ-93(V)4	C41398	$32,000	1	1	1	1	0
Command and Control System: AN/GYQ-93(V)2	C40608	$28,000	2	2	2	2	0
Command and Control System: AN/GYQ-93(V)1	C60818	$66,500	3	3	3	3	0
Command and Control System: AN/GYQ-97A	C56327	$57,031	17	21	21	21	19
Computer Set: AN/UYK-128(V)2	FJ1013	n/d	11	11	11	11	0
Command Center System: AN/TSQ-243	C61665	$80,000	491	492	492	492	447
Command System Tactical: AN/TYQ-146(V)1	C61222	$277,821	3	3	3	3	0
Command System Tactical: AN/TYQ-155 (V)1 *	C61290	$89,057	398	399	399	399	358
Command System Tactical *	C40996	$404,212	251	251	257	258	213
Communication Subsystem: AN/TSQ-259 *	C88821	$141,983	472	473	473	473	324
Computer System: Digital AN/PYQ-6C	C67436	$6,810	35	35	35	35	0
Computer Set: Digital FBCB2	FJ1007	$15,850	264	264	264	264	0
Computer Set: Digital AN/GYK-62B *	C13866	$16,530	693	730	749	749	748
Computer Set: Digital AN/GYK-62G Command Post (TOC)	Z758FD	n/d	0	60	122	188	0
Computer Set: AN/UYK-128(V)3 *	C18378	$15,954	16,350	20,537	20,537	20,537	26,353
Computer Set: Digital AN/UYK-128B(V)3	Z757FD	n/d	0	1,110	2,327	3,549	0
Computer Set: Digital AN/UYK-128(V)1	C05069	$15,954	788	788	788	788	159
Computer System: Digital AN/PYQ-13 (GCCS-A)	C27588	$3,497	172	188	188	188	224
Computer System: Digital *	C27963	$10,222	4,767	4,859	5,055	5,104	3,589
Computer System: Digital AN/PYQ-12	C18641	$16,968	423	424	424	424	332
Computer System: Digital AN/PYQ-16	C18891	$11,599	196	196	196	196	136
Computer System: Digital AN/GYK-61 *	C18448	$14,548	2,315	2,320	2,320	2,320	2,144
Computer System: Digital AN/UYQ-90(V)2 *	C18278	$16,676	7,686	7,686	7,686	7,686	13,734
Generator Set: DED 60kW 400Hz Skid-mtd	G62960	$29,793	1	1	1	1	0
Generator Set: DED 60kW 50/60Hz Skid-mtd	G63256	$26,956	1	102	156	199	147
Generator Set: DED TM 10kW 60Hz *	G42170	$25,757	1,536	1,536	1,536	1,536	27
Generator Set: DED TM 5kW 60Hz *	G42238	$23,738	1,060	1,070	1,070	1,070	926

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Generator Set: DED 5kW 50/60Hz Skid-mtd	G42488	$18,716	31	383	1,167	1,754	1,819
Generator Set: DED 10kW 400Hz Skid-mtd *	G74779	$15,304	76	78	78	78	77
Generator Set: DED 10kW 60Hz Skid-mtd *	G74711	$10,700	1,803	1,804	1,804	1,804	184
Generator Set: DED 15kW 50/60Hz Skid-mtd *	G12170	$20,000	298	298	298	300	23
Generator Set: DED 30kW 400Hz Skid-mtd	G74643	$24,334	5	5	5	5	3
Generator Set: DED 30kW 50/60Hz Skid-mtd *	G74575	$26,705	92	92	92	92	87
Generator Set: DED 3kW 60Hz Skid-mtd *	G18358	$9,922	6,438	6,818	6,818	6,818	6,894
Generator Set: DED 5kW 60Hz Skid-mtd *	G11966	$12,798	2,207	2,214	2,214	2,214	175
Generator Set: DED 60kW 400Hz Skid-mtd *	G18052	$28,425	11	13	13	13	10
Generator Set: DED 60kW 50/60Hz Skid-mtd *	G12034	$25,073	330	331	331	331	202
Generator Set: DED 10kW 400Hz Skid-mtd	G75018	$21,273	1	13	25	36	0
Generator Set: DED 15kW 400Hz Skid-mtd	G74950	$22,270	0	13	33	51	0
Generator Set: DED 30kW 50/60Hz Skid-mtd	G75200	$22,046	0	34	84	131	2
Generator Set: DED 15kW 50/60Hz Skid-Mtd	G49966	$20,949	0	45	110	172	203
Generator Set: DED TM 100kW 60Hz mtd on M353 PU-495	J35801	$44,776	7	7	7	7	4
Generator Set: DED 100kW 50/60Hz Tactical Utility	J38712	$10,541	4	4	4	4	18
Generator Set: DED 200kW 60Hz Skid Tactical Precise	J40150	$19,204	0	0	0	0	1
Generator Set: DED 10kW 400Hz mtd on M116A2 PU-799 *	G53403	$30,472	29	29	29	29	6
Generator Set: DED TM PU-802 *	G53778	$31,481	1,155	1,155	1,155	1,155	31
Generator Set: DED TM PU-803 *	G35851	$38,418	373	373	373	373	16
Generator Set: DED TM PU-804	G35919	$42,197	1	1	1	1	0
Generator Set: DED 28V DC MEP-501A *	G36169	$6,000	83	83	83	83	46
Generator Set: DED 60Hz AC MEP-531A *	G36237	$6,000	2,506	2,563	2,584	2,609	2,577
Generator Set: DED AN/MJQ-33	G78135	$18,035	1	1	1	1	0
Generator Set: DED TM 15kW 60Hz *	G78374	$32,622	144	144	144	144	24
Generator Set: DED MEP807A	G17596	$67,000	5	5	5	5	0
Generator Set: DED MEP809A	G17664	$75,000	0	0	0	0	3
Generator Set: DED TM 60kW 400Hz PU-806 Chassis	G17460	$49,182	16	16	16	16	6
Generator Set: DED TM 60kW 50/60Hz PU-805 Chassis *	G78306	$44,185	220	220	220	220	43
Generator Set: GTE 60kW 400Hz Wheel-mtd SP	G40629	$241,643	0	0	0	0	3
Generator Set: DED 10kW 50/60Hz: Skid-mtd	G07461	$19,912	17	352	759	1,534	1,708
LTT Trailer-mtd (TM): PP-3001 5kW 50/60Hz	L27002	$69,552	0	9	20	32	0
LTT TM: PU-2001 5kW 50/60Hz	L26934	$42,208	0	225	395	594	281
LTT Trailer-Mtd: PU-2002 10kW 50/60Hz	L84622	$43,721	0	181	483	891	1,641
LTT TM: PU-2003 15kW 50/60Hz	L84690	$45,033	0	49	128	187	123
Power Plant: Electric DED TM 5kW 60Hz AN/MJQ-35 *	P28083	$46,322	101	101	101	101	80
Power Plant: Electric DED TM 5kW 60HzAN/MJQ-36	P28151	$46,257	6	7	7	7	6
Power Plant: Diesel TM 10kW 60Hz AN/NJQ-37 *	P42262	$50,294	161	161	161	161	179
Power Plant: Electric TM 30kW 50/60Hz AN/MJQ-40 *	P42126	$85,594	99	99	99	99	85
Power Plant: Electric TM 60kW 50/60Hz AN/MJQ-41 *	P42194	$96,819	58	58	58	58	4
Power Plant: Electric DED TM	P63530	$74,134	182	182	182	182	0
Power Plant: Utility (Medium) *	P63394	$250,000	170	170	170	170	138
Power Plant: Utility (Medium) *	P63462	$135,000	1,634	1,634	1,634	1,634	1,156

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Power Supply: PP-6224/U *	P40750	$4,322	2,739	4,791	8,141	8,584	11,239
Tactical Computer Processor: AN/UYQ-43 (V)1	T13413	$100,000	1	1	1	1	0
Trailer-mtd: PP-3102 10kW 50/60Hz M200A1	T39849	$72,145	0	11	30	48	8
Trailer-mtd: PP-3105 30kW 50/60Hz 2M200A1	T39917	$95,834	1	11	25	47	25
Trailer-Mtd: PP-3106 60kW 50/60Hz 2M200A1	T93232	$58,622	2	12	23	24	55
Trailer-Mtd: PU-2101 15kW 50/60Hz M200A1	T40090	$44,157	10	182	486	880	1,443
Trailer-mtd: PU-2102 30kW 50/60Hz M200A1	T39954	$45,545	4	55	126	205	400
Trailer-mtd: PU-2113 60kW 400Hz M200A1	T93368	$43,751	0	1	1	1	0
Trailer-mtd: PP-3003 15kW 50/60Hz	T49579	$93,924	0	10	24	45	193
Battlespace Awareness							
Data Analysis Central: AN/MSW-24	D77801	$318,673	6	13	16	16	35
Detecting System Countermeasures: AN/MLQ-40(V)4	D04182	$1,400,000	15	35	35	35	94
Battle Command Transport Networks							
Airborne Maritime Fixed - Maritime Fixed (AMF-MF)	Z603FD	n/d	63	157	272	388	0
Battalion Command Post (Switching Group): OM-XXX *	B67234	$225,000	471	509	527	527	528
Central Office: Telephone Automatic AN/TTC-56(V)3	C20617	$1,525,000	10	10	10	10	16
Communication Subsystem: AN/USQ-165	C05001	$33,105	7	7	7	7	2
Radio Terminal Line of Sight Multi-channel: AN/TRC-190E(V)3	Z01314	n/d	0	32	32	32	0
Radio Terminal Line of Sight Multi-channel: AN/TRC-190D(V)1	Z01751	n/d	0	33	33	33	0
Frequency Hopping Multiplexer: TD-1456VRC	F99520	$28,547	651	819	851	897	954
Joint Node Network (JNN) Central Office Telephone Auto *	J05001	$1,200,000	149	158	162	162	162
MBITR: Maritime Version	M27045	$12,400	223	223	223	223	238
MBITR: Urban Version *	M18029	$11,900	6,524	7,321	7,321	7,321	1,729
Net Control Station: AN/TSQ-158	N04580	$390,885	4	10	20	20	22
Handheld Type 1 Radio *	R55336	$8,872	5,467	5,726	5,726	5,726	2,360
Radio Set: AN/PRC-148	FA100W	n/d	2,164	2,843	2,843	2,970	0
Radio Set: Grid Reference AN/GRC-229D	R91580	$54,158	0	0	5	11	36
Radio Set: AN/PRC-119F(C) *	R83141	$4,346	7,102	7,333	7,360	7,386	9,359
Radio Set: AN/PRC-155(V)1	Z01608	n/d	0	662	1,324	1,986	0
Radio Set: AN/VRC-111	R45778	$42,840	7	7	7	7	0
Radio Set: AN/VRC-87F(C) *	R67296	$6,532	708	718	718	718	741
Radio Set: AN/VRC-88F(C) *	R67330	$7,123	988	1,223	1,223	1,223	1,395
Radio Set: AN/VRC-89F(C) *	R44999	$11,128	2,985	3,522	3,534	3,601	5,743
Radio Set: AN/VRC-90F(C) *	R68044	$7,415	34,935	35,112	35,112	35,112	57,868
Radio Set: AN/VRC-91F(C) *	R68146	$11,817	6,541	6,590	6,600	6,606	11,865
Radio Set: AN/VRC-92F(C) *	R45543	$13,446	12,376	12,483	12,729	12,944	15,538
Radio Set: AN/VSQ-2D(V)1	P49587	$50,011	1,084	1,085	1,085	1,085	714
Radio Set: AN/VSQ-2D(V)2	P99724	$50,918	98	187	187	187	258
Radio Set: AN/VSQ-2D(V)4	R78005	$81,374	2	2	2	2	12
Radio Terminal Set	FA9513	$51,067	6	6	6	6	0
Radio Terminal: LOS Multi-channel AN/TRC-190C(V)1 *	R90451	$322,127	358	359	407	427	404
Radio Terminal: LOS Multi-channel AN/TRC-190C(V)3 *	R90587	$397,740	189	189	211	724	210
Radio Test Set: AN/GRM-122 *	R36178	$36,070	643	644	644	644	648

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Teleconference System: AN/TYQ-122 *	T43146	$23,000	148	211	211	211	223
Combat Mobility							
Assault Breacher Vehicle (ABV)	A05001	$2,599,000	6	12	12	19	36
Boat Bridge Erection Inboard Engine: Shallow Draft *	B25476	$210,000	143	163	172	180	172
SOF Demolition Kit: M303	S93791	$5,000	111	181	225	271	153
Tool Kit: Urban Operations	T30195	$60,295	289	395	456	504	65
Urban Operations: Platoon Kit	U88092	$165,000	112	136	160	185	40
Field Logistics							
Fire Suppression Refill System (FSRS)	Z756FD	n/d	0	9	22	33	0
Advanced Aviation Forward Area Refueling Sys (AAFARS) *	F42611	$321,537	110	110	110	110	129
Forward Area Water Point Supply System (FAW SS) *	F42612	$46,879	248	404	404	404	45
Fuel System Supply Point (FSSP) Type-3 120K	F04898	$685,000	63	63	63	63	44
Hydraulic System Test and Repair Unit (MX3)	H05002	$80,000	60	76	79	80	286
Light Capacity Rough Terrain Forklift (LCRTF): 5K	Z01326	n/d	0	9	53	102	0
LHS-compatible 2K-gal Water Tank-Rack (HIPPO) *	T32629	$131,839	455	628	728	816	976
Modular Fuel System (MFS): Pump Rack Module (PRM)	Z01595	n/d	0	7	7	7	2
Multi-temperature Refrigerate Container System (MTRCS)	M30688	$107,100	104	162	221	280	178
Petroleum Quality Analysis System (PQAS)	P25493	$668,000	3	3	3	3	2
Petroleum Quality Analysis System	P25743	$1,384,000	8	8	9	10	9
Rough Terrain Container Handler: Kalmar RT240 *	R16611	$740,815	88	88	88	88	83
Tank Assembly Fabric Collapsible: 10000-gal Petroleum	V12552	$7,083	5	5	5	5	0
Tank Fabric Collapsible: Water 3000-gal	V15018	$1,816	11	11	11	11	204
Tank Unit Liquid Dispensing Trailer Mounting *	V19950	$2,000	487	543	633	733	935
Test Station Electrical Electronic Equipment Containerized	Z01554	n/d	0	6	10	15	49
Tool Outfit Hydraulic System: Test and Repair 3/4-ton TM	T30377	$91,947	61	62	62	62	38
Trailer Tank Water: 400-gal 1-1/2 ton *	W98825	$16,000	3,126	3,128	3,128	3,128	3,399
Truck Dolly: Steel Gen Utility Type w/Wheels wo/Pad	X43160	$382	136	136	136	136	134
Truck Hand Platform: Wood Nontilt Type	X47818	$693	528	639	642	642	918
Truck Lift Fork Articulated: All Terrain DED 10000-lb Capacity	T73713	$75,000	1	1	1	1	14
Truck Lift Fork: DED 4000-lb Capacity OPT LH	X48863	$30,000	19	19	19	19	0
Truck Lift Fork: DED 50K-lb Container Handler RT	T48941	$159,138	5	5	5	5	31
Truck Lift Fork: DED 6000-lb Capacity 130-in LH	X48876	$29,000	7	7	7	7	0
Truck Lift Fork: DED 6000-lb Variable Reach RT Ammo-hdlg	T48944	$72,370	483	484	484	484	161
Truck Lift Fork: DED PT 50000-lb w/Top LF Atch	X48904	$124,797	0	0	0	0	19
Truck Lift Fork: DED 10000-lb Capacity Rough Terrain	X49051	$52,821	7	7	7	7	9
Truck Lift Fork: DED 4000-lb Capacity Rough Terrain *	T49255	$75,000	320	320	330	337	516
Truck Lift Fork: DED 6000-lb Capacity Rough Terrain	X48914	$79,497	39	39	39	39	56
Truck Lift Fork: DSL/Gas/LPG 6000-lb OPT LH	X51722	$31,545	40	40	40	40	0
Truck Lift Fork: Gas 4000-lb	X51585	$26,134	13	14	14	14	612
Truck Lift Fork: Gas PT 6000-lb	X51791	$14,411	9	11	11	11	106
Truck Lift Wheel: Mechanical Lift 2400-lb	X53298	$637	554	697	697	697	1,538
Truck Lift Fork: Variable Reach Rough Terrain *	T73347	$166,639	646	716	717	717	808
Water Purification: Reverse Osmosis 3K-gph TM *	W47225	$748,000	65	75	75	79	79

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Water Storage/Distribution Set: 40K-gpd (Brigade) *	W55968	$121,746	6	9	11	12	36
Water Purifier: Lightweight *	W30051	$167,062	221	221	221	221	111
Force Protection							
Battlefield Anti-intrusion System: AN/PRS-9	B57077	$40,000	3,580	3,851	3,851	3,851	3,656
Chem-Bio Protective Shelter: M8 *	C07506	$622,051	6	38	38	38	287
Chem-Bio Protective Shelter (CBPS)	Z01533	n/d	8	25	29	52	0
Joint Chemical Agent Detector *	J00697	$4,101	14,500	15,059	15,186	15,287	18,063
Lighting Kit Motion Detector (LKMD): AN/GAR-2	L02015	$3,500	6,608	7,130	7,130	7,130	5,329
Mask Chem-Bio Joint Service General Purpose: M50	M12986	$262	8,646	9,594	9,653	10,232	268,271
Mask Chem-Bio: Combat Crewman: M51	M13236	$430	306	418	418	418	25,208
General Engineering							
Hydraulic-Electric-Pneumatic-Petroleum Operated Equipment (HEPPOE)	H05004	$175,500	89	121	151	181	55
Maneuver Combat Vehicles							
Anti-Tank Guided Missile Vehicle (ATGM)	A83852	$3,968,945	9	9	9	9	9
Carrier 120mm Mortar: Self-propelled Armored	C10990	$318,308	138	138	138	138	119
Carrier Personnel Full Tracked: Armored (RISE)	C18234	$405,815	909	909	909	909	840
Cavalry Fighting Vehicle: M3	C76335	$1,056,845	2	2	2	2	8
Command Variant Vehicle (CV)	C41314	$2,371,316	27	27	28	29	29
Engineer Squad Vehicle (ESV)	J97621	$3,701,301	12	13	13	13	13
Fighting Vehicle: Full Tracked Cavalry (CFV) M3A3	F90796	$4,021,449	58	59	59	59	30
Fighting Vehicle: Full Tracked Cavalry High Survivability (CFV)	F60530	$1,144,000	78	78	78	78	51
Fighting Vehicle: Full Tracked Infantry (IFV) M2A3	F60564	$4,409,064	159	284	284	284	462
Fighting Vehicle: Full Tracked Infantry High Survivability (IFV)	F40375	$1,349,348	341	341	350	362	35
Fire Support Vehicle (FSV)	F86821	$3,113,809	13	13	13	13	13
Infantry Carrier Vehicle (ICV)	J22626	$2,201,425	146	147	147	147	129
M2A2OD for Engineers	M31793	$1,311,639	7	7	7	7	91
Medical Evacuation Vehicle (MEV) *	M30567	$2,086,141	16	16	16	16	16
Mobile Gun System (MGS)	M57720	$7,330,829	9	9	9	9	27
Mortar Carrier Vehicle (MCV)	M53369	$2,893,627	36	36	36	36	36
Operation Desert Storm (ODS) Situational Awareness (SA): M2A2	P19727	$2,300,000	279	279	279	279	59
ODS SA: M3A2	P19795	$2,300,000	119	119	119	119	183
Reconnaissance Vehicle (RV)	R62673	$2,856,699	51	51	51	51	51
Recovery Vehicle Full Tracked: Heavy M88A2	R50885	$2,748,846	167	167	248	323	130
Recovery Vehicle Full Tracked: Medium	R50681	$1,210,755	284	285	285	285	256
Tank Combat Full Tracked: 120mm Gun	T13168	$2,393,439	501	501	501	501	538
Tank Combat Full Tracked: 120mm Gun M1A2	T13305	$4,445,399	109	125	125	125	27
Maneuver Systems							
Drivers Enhancers: AN/VAS-5 *	D41659	$35,000	3,209	3,252	3,445	3,616	4,528
Surveillance System: Scout Long Range AN/TAS-8 *	S02976	$400,000	1,017	1,043	1,079	1,084	1,082
Target Acquisition System: TOW Improved ITAS M41	T24690	$1,010,000	669	724	724	724	726

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

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Medical Field Systems							
Medical Equipment Set (MES): Chemical Agent Patient Treatment *	M23673	$49,934	905	905	905	907	922
MES: Sick Call Field	M30156	$34,728	86	86	86	86	6
MES: Combat Medic *	U65480	$3,805	4,833	4,864	4,870	4,870	5,003
Soldier Systems							
Acoustic Gunshot Detection System (GDS): PILAR MK-IIW Vehicle	A09441	$55,660	12	12	12	12	12
Acoustic GDS: PILAR	A06293	$55,440	13	13	13	13	16
Basic Sight Assembly: Support Equipment (TOW 2)	B39044	$83,388	39	43	44	44	44
Ground Soldier System	Z074FD	n/d	0	832	1,736	2,640	0
Helmet Unit: Integrated (IHADSS)	H35257	$19,573	690	754	754	754	758
Image Intensifier, Night Vision	FA5535	$12,739	3	3	3	3	0
Laser: Target Locator Module	L05003	$120,869	1,032	1,486	1,486	1,493	3,746
Laser: Target Locator Module	Z01676	n/d	0	215	822	1,622	0
Marker: Laser System	M14868	$95,000	34	34	34	34	108
Mini Eyesafe Laser IR Observation Set (MELIOS): AN/PVS-6	M74849	$22,015	1,333	1,333	1,333	1,333	884
Night Vision Sight: AN/PVS-1	FA5575	$12,910	7	7	7	7	0
Rope Assembly: Insertion and Extraction System	R22995	$1,281	207	207	207	207	398
Sensor, Infrared	FA550P	n/d	57	57	57	57	0
Universal Night Sight (UNS): AN/PVS-22	S90501	$8,100	101	101	101	101	0
Tactical Communications and Protective System (TCAPS)	Z661FD	n/d	2,500	6,250	7,500	7,500	0
Target Locator Module	T27471	$66,735	1,060	1,246	1,256	1,256	5,885
Unmanned Ground Vehicle Tracked: XM216	U31832	$187,312	0	39	49	49	49
Viewer Infrared: AN/PAS-7	Y03104	$16,779	6	6	6	6	0
Viewer Night Vision	FA5597	$6,172	15	15	15	15	0
Mounted Water Ration Heater (MWRH)	W52987	$1,503	258	258	258	258	0
Soldier Weapons							
Command Launch Unit: (Javelin) 13305405-119 *	C60750	$133,063	2,634	2,634	2,634	2,634	2,591
Launcher Grenade: M320 *	L03621	$3,413	613	1,563	2,298	3,046	6,382
Launcher Grenade: M320A1 *	L69080	$3,413	11,438	11,438	11,438	11,464	16,230
Machine Gun: 5.56mm M249	M09009	$3,830	28,402	29,583	30,023	30,027	27,422
Machine Gun: 7.62mm Fixed	L92352	$5,474	1,078	1,085	1,085	1,085	1,092
Machine Gun: 7.62mm Fixed RH Feed	M92420	$4,890	1,021	1,021	1,021	1,021	1,016
Machine Gun: 7.62mm M240L	M92454	$12,000	3,128	3,253	3,271	3,280	3,511
Machine Gun: 7.62mm M240H	M92591	$8,593	1,486	1,493	1,493	1,493	1,525
Machine Gun: Caliber .50 HB Flexible (Ground & Vehicle)	L91975	$12,685	11,876	11,892	11,892	11,892	6,857
Machine Gun: Caliber .50 Heavy Fixed Turret Type	L91701	$13,648	1,675	1,742	1,742	1,764	1,785
Machine Gun Grenade: 40mm Mk19 Mod III	M92362	$15,320	8,794	9,326	9,328	9,328	9,037
Machine Gun: 7.62mm M240B	M92841	$6,000	14,072	14,098	14,134	14,134	12,347
Machine Gun: Caliber .50	M39331	$8,493	5,709	6,212	8,375	10,519	7,958
Machine Gun: 5.56mm M249 Light	M39263	$2,779	5,068	5,068	5,069	5,069	7,893
Rifle 5.56mm: M4 *	R97234	$1,329	153,500	153,705	153,705	153,705	153,669
Rifle 7.62mm:	R95114	$2,500	1,751	1,941	1,941	1,941	2,203

ARNG

Table 1

Consolidated Major Item Inventory and Requirements

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Rifle Sniper Caliber .50: M107 *	R45351	$7,500	670	670	670	672	697
Rifle Sniper: M110 *	R45601	$8,500	601	604	604	604	600
Strike							
Aiming Circle	A22496	$3,725	938	938	938	951	1,118
Computer System, Digital: AN/PYG-2(V)1	C40495	$8,114	317	317	317	317	70
Computer Set: AN/GYG-1(V)1	C17936	$65,700	117	140	140	140	698
Computer Set: AN/GYG-1(V)3	C18004	$155,600	57	57	57	57	175
Computer Set: Back-up General	C78623	$393	4	4	4	4	4
Computer System, Digital: AN/PYG-1	Z00311	n/d	20	46	46	46	0
Computer System, Digital: AN/GYK-56 (AFATDS)	C05018	$32,958	280	281	281	281	313
Computer System, Digital: AN/PYG-1	C53293	$7,649	470	532	556	576	622
Data Display Group Gun Direction: OD-144(V)3/GYK-29	D31693	$12,919	0	0	0	0	10
Fire Support Team Vehicle: Bradley (BFIST)	F86571	$903,195	24	24	24	24	0
Howitzer Light Towed: M119	H57505	$1,100,000	326	328	328	328	80
Howitzer Medium Self-propelled: 155mm	K57667	$923,286	1	1	1	1	3
Howitzer Medium Towed: M777	H57916	$2,500,000	120	120	120	120	223
Knight: Armored	K29708	$1,718,004	186	186	186	186	158
Lightweight Counter Mortar Radar: AN/TPQ-50	Z00962	n/d	8	33	50	54	92
Meteorological Measuring Set - Profiler: AN/TMQ-52	M36361	$2,024,000	31	31	31	31	13
Plotting Board Indirect Fire: Azimuth	P07900	$664	653	653	653	653	795
Protractor Fan Range Deflection: AL 1-50000 meter Range	P81748	$736	20	20	20	20	131
Quadrant Fire Control: Gunners	Q03468	$721	578	589	589	589	589
Radar Chronograph Set: M90	R13838	$23,034	5	5	5	5	0
Radar Chronograph Set: MVS PALADIN	R20826	$25,000	101	101	101	101	106
Radar Set: AN/TPQ-37(V)9	A41666	$14,465,414	9	9	9	9	1
Radar System: Counter Fire Target Acquisition Radar	Z00737	n/d	4	10	19	38	56
Range Finder-Target Designator: Laser AN/PED-1	R60282	$350,000	669	863	863	863	767
Support Systems							
Container Handling	C27294	$40,165	725	731	731	731	350
Trailers							
Semitrailer Flatbed: Breakbulk/Container 22-1/2-ton *	S70027	$33,156	3,681	3,681	3,681	3,681	3,450
Semitrailer Flatbed: Breakbulk/Container 34-ton *	S70159	$43,252	3,648	3,749	3,749	3,753	4,358
Semitrailer Low-bed: 15-25 ton 4-wheel	S70380	$27,114	28	33	33	33	157
Semitrailer Low Bed: 25-ton 4-wheel W/E *	S70517	$7,729	204	210	215	215	759
Semitrailer Low-bed: 50-ton 8-wheel	S70759	$24,811	6	6	6	6	122
Semitrailer Low-bed: Heavy Equipment Transporter 110-ton	S70032	$103,000	1	1	1	1	75
Semitrailer Stake: 12-ton 2-wheel 26-30 ft Body	S72161	$16,095	2	5	5	5	79
Semitrailer Stake: 20-ton 4-wheel	S72178	$24,035	3	3	3	3	53
Trucks							
Truck Ambulance: 2-Litter Armored HMMWV	T38707	$71,900	29	29	29	29	2
Truck Ambulance: 4-Litter Armored HMMWV *	T38844	$113,998	1,340	1,340	1,340	1,340	1,685
Truck Cargo: 5-ton wo/Winch *	T41515	$200,000	4,395	4,535	4,546	4,546	7,408
Truck Cargo: Heavy PLS Transporter 15-16.5 ton w/MHE *	T41067	$288,015	530	532	532	532	24
Truck Cargo: 8X8 HEMTT w/LHS *	T96496	$321,057	851	851	857	908	36

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Truck Utility TOW/ITAS Carrier w/IAP Armor-ready: M1167 *	T34840	$222,487	416	468	480	492	648
Truck Wrecker *	T94671	$375,000	202	212	212	212	117
Truck Wrecker: M984A4	T63161	$491,382	334	362	376	391	989
Truck Wrecker: Tactical HEMTT W/W *	T63093	$503,382	680	680	681	681	56
Truck: Palletized Loading System (PLS)	T81874	$360,000	626	644	731	868	1,800

1. "*" indicates a Critical Dual Use (CDU) equipment item

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aerial Scout Helicopter: OH-58D	A21633	17	
Helicopter Cargo Transport: CH-47D	H30517	2	
Helicopter Observation: OH-58C	H31110	43	
Helicopter Light Utility (LUH): UH-72A	H31329	3	
Helicopter Utility: UH-60L	H32361	22	
Helicopter Utility: UH-60M	H32429	7	
Helicopter Attack: AH-64D	H48918	10	
Helicopter Utility: UH-60A	K32293	31	
Airplane Cargo Transport: C-12D	A29812	30	
Airplane Cargo Transport: C-23B	A29880	16	
Airplane: Cargo Transport C-26	A46758	21	
Airplane: Cargo Transport	BA108Q	21	
Aviation			
Aviators Night Vision Imaging System: AN/AVS-6(V)1	A06352	11	
Battle Command and Control (C2)			
Computer System: Digital AN/TYQ-109(V)1	C27707	9	
Generator Set: DED Skid-mtd 5kW 60Hz	G11966	10	
Generator Set: DED TM PU-803	G35851	11	
Generator Set: DED: 60Hz AC MEP-531A	G36237	12	
Generator Set: DED TM 10kW 60Hz	G40744	24	
Generator Set: DED TM 10kW 60Hz	G42170	10	
Generator Set: DED TM 5kW 60Hz	G42238	9	
Generator Set: DED Trailer-mtd (TM) PU-802	G53778	8	
Generator Set: DED Skid-mtd 10kW 60Hz	G74711	9	
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	26	
Power Plant: Electric TM 30kW 50/60Hz AN/MJQ-40	P42126	11	
Power Plant: Diesel TM 10kW 60Hz AN/NJQ-37	P42262	14	
Combat Mobility			
Boat Bridge Erection Inboard Engine: Shallow Draft	B25476	20	
Cradle: Improved Boat (IBC) M14	C33925	10	
Interior Bay Bridge Floating	K97376	11	
Launch M60 Series Tank Chassis Transpt: 40/60ft Bridge	L43664	40	
Loader Scoop Type: DED w/5 Cy Gp Bucket (CCE)	L76321	35	
Loader Scoop Type: DSL 2-1/2 cu yd w/Multi Purp Bucket	L76556	29	
Pallet: Bridge Adapter (BAP) M15	P78313	8	

ARNG

Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Ramp Bay Bridge Floating	R10527	12	
Tractor Wheeled: DSL w/Excavator & Front Loader	T34437	25	
Transporter Common Bridge	T91308	12	
Tractor FT HS: Armored Combat Earthmover (ACE)	W76473	22	
Field Logistics			
Containerized Kitchen (CK)	C27633	6	
Truck Lift Fork: DED 50K lb Cont Hdlr Rough Terrain	T48941	31	
Truck Lift Fork: Variable Reach Rough Terrain	T73347	7	
Water Purification: Reverse Osmosis 3Kgph TM	W47225	19	
General Engineering			
Crane: Whl-mounted Hydraulic 25-ton All Terrain AT422T	C36586	13	
Distributor Water Tank Type: 6K-gal Semitrailer-mtd (CCE)	D28318	29	
Excavator: Hydraulic (HYEX) Type I	E27792	14	
Excavator: Hydraulic (HYEX) Type II	E41791	12	
Compactor High Speed: Tamping Self-Propelled (CCE)	E61618	15	
Grader Road Motorized: DED Heavy (CCE)	G74783	29	
Fire Fighting Equipment Set: TM Multipurpose	H56391	29	
Grader Road Motorized: DED Sectionalized	J74886	31	
Scraper Elevating: SP 9-11 cu yd sectionalized	S30039	6	
Scraper Earth Moving: SP 14-18 cu yd (CCE)	S56246	28	
Truck Concrete: Mobile Mixer 8 cu yd (CCE)	T42725	34	
Tractor FT HS: Deployable Lt Engineer (DEUCE)	T76541	12	
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Winch	W76816	35	
Tractor FT LS: DSL Med DBP w/Buldoz w/Scarif Ripper	W83529	29	
Tractor FT LS: DSL Hvy DBP w/Buldoz w/Ripper (CCE)	W88699	36	
Maneuver Combat Vehicles			
Carrier Personnel Full Tracked: Armored (RISE)	C18234	27	
Cavalry Fighting Vehicle: M3	C76335	29	
Fighting Vehicle: Full Track Infantry Hi Survivability (IFV)	F40375	20	
Fighting Vehicle: Full-Track Cavalry Hi Survivability (CFV)	F60530	24	
Fire Support Vehicle (FSV)	F86821	8	
Infantry Carrier Vehicle (ICV)	J22626	7	
Infantry Fighting Vehicle: M2	J81750	29	
Engineer Squad Vehicle (ESV)	J97621	7	
Mortar Carrier Vehicle (MCV)	M53369	10	
Mobile Gun System (MGS)	M57720	29	
Recovery Vehicle Full Tracked: Medium	R50681	36	
Tank Combat Full Tracked: 120mm Gun	T13168	21	
Tank Combat Full Tracked: 105mm M1 (Abrams)	T13374	29	

ARNG

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	44	
Howitzer Light Towed: M119	H57505	6	
Howitzer Medium Self Propelled	H57642	29	
Howitzer Medium Self Propelled: 155mm	K57667	43	
Support Systems			
Container Platform: Roll-In/Roll-Out	B83002	18	
Container Handling Unit (CHU)	C84862	8	
Trailers			
Semitrailer Tank: 5K-gal Bulk Haul Self-Load/Unload	S10059	15	
Semitrailer Flatbed: Breakbulk/Cont Transporter 22-1/2-ton	S70027	19	
Semitrailer Flatbed: Breakbulk/Container Transporter 34-ton	S70159	24	
Semitrailer Low-bed: 40-ton 6-wheel	S70594	23	
Semitrailer Low-bed: 70-ton Heavy Equip Transporter (HET)	S70859	14	
Semitrailer Tank: 5K-gal Fuel Dispensing Automotive	S73372	18	
Semitrailer Van: Repair Parts Storage 6-ton 4-wheel	S74832	40	
Trailer Flatbed: 11-ton 4-wheel (HEMAT)	T45465	13	
Trailer: Palletized Loading 8X20	T93761	7	
Trailer Cargo: MTV W/Dropsides M1095	T95555	3	
Trailer Cargo: High Mobility 1-1/4-ton	T95924	6	
Trailer: Light Tactical 3/4-ton	T95992	4	
Trailer Flatbed: M1082 Cargo LMTV w/Dropsides	T96564	5	
Trucks			
Truck Utility: TOW Carrier Armored (HMMWV)	T05096	26	
Truck Utility: Heavy Variant (HMMWV) 10K GVW	T07679	15	
Truck Utility: ECV Armament Carrier M1151A1	T34704	5	
Truck Ambulance: 2 Litter Armored (HMMWV)	T38707	25	
Truck Ambulance: 4 Litter Armored (HMMWV)	T38844	24	
Truck Cargo: Tactical HEMTT w/Lt Crane W/W	T39518	26	
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	10	
Truck Cargo: Heavy PLS Transporter 15-16.5 ton w/MHE	T41067	18	
Truck Cargo: MTV W/W	T41135	8	
Truck Cargo: MTV w/MHE	T41203	8	
Truck Tank: Fuel Servicing 2500G HEMTT W/W	T58161	18	
Truck Tractor: Heavy Equipment Transporter (HET)	T59048	15	
Truck Cargo: Tactical HEMTT w/Lt Crane	T59278	25	
Truck Cargo: LMTV	T60081	8	

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Truck Cargo: LMTV W/W	T60149	8	
Truck Tractor: Line Haul C/S 50000 GVW 6X4 M915	T61103	18	
Truck Tractor: MTV	T61239	9	
Truck Tractor: MTV W/W	T61307	8	
Truck Utility: Cargo/Troop Carrier (HMMWV)	T61494	23	
Truck Utility: Cargo/Troop Carrier W/W (HMMWV)	T61562	24	
Truck Cargo: MTV LWB	T61704	8	
Truck Cargo: MTV LWB W/W	T61772	10	
Truck Cargo: MTV	T61908	7	
Truck Wrecker: Tactical HEMTT W/W	T63093	15	
Truck Dump: MTV	T64911	17	
Truck Tank: Fuel Servicing 2500G HEMTT	T87243	16	
Truck Tractor: LET 6X6 66000 GVW W/W C/S	T91656	12	
Truck Utility: Armt Carrier Armored (HMMWV)	T92242	24	
Truck Utility: Armt Carrier Armored W/W (HMMWV)	T92310	24	
Truck Utility: ECV Up-Armored (HMMWV)	T92446	12	
Truck Van: LMTV	T93484	8	
Truck Wrecker: MTV W/W	T94709	8	
Truck Cargo: Tactical 8X8 HEMTT w/LHS	T96496	8	
Truck Dump: 20-ton DED 12 cu yd Cap (CCE)	X44403	21	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017
Aircraft			
UH-60 Blackhawk M Model (MYP)	$424,680,000	$319,584,000	$415,826,000
Modification of Aircraft			
Utility/Cargo Airplane Modifications	3,893,000	3,275,000	8,265,000
Utility Helicopter Modifications	55,917,000	37,099,000	80,819,000
Network and Mission Plan	11,682,000	10,727,000	16,030,000
Comms, Nav Surveillance		51,088,000	46,731,000
Global Air Traffic Management (GATM) Rollup		19,581,000	19,248,000
RQ-7 Unmanned Aerial Vehicle (UAV) Modifications	34,125,000		
Support Equipment and Facilities			
Common Ground Equipment	16,225,000	33,058,000	35,218,000
Air Traffic Control	27,836,000	88,441,000	
Other Missiles			
Indirect Fire Protection Capability Increment 2-I			15,188,000
Multiple Launch Rocket System (MLRS) Reduced Range Practice Rockets (RRPR)	8,677,000	8,484,000	8,322,000
Modification of Missiles			
Avenger Modifications		11,544,000	17,615,000
Improved Target Acquisition System (ITAS) / TOW Modifications	19,676,000	13,318,000	
MLRS Modifications	2,000,000	848,000	
High Mobility Artillery Rocket System (HIMARS) Modifications	3,523,000	2,165,000	1,818,000
Spares and Repair Parts (Missiles)	226,000	226,000	226,000
Weapons and Tracked Combat Vehicles (WTCV)			
Fire Support Team (FIST) Vehicle (Modifications)	24,714,000		
Howitzer, Medium Self-propelled Full-tracked 155mm M109A6 (Modifications)	17,786,000	19,371,000	26,056,000
Paladin Integrated Management (PIM)			192,040,000
Improved Recovery Vehicle (M88A2 Hercules)	23,351,000		40,572,000
M88 Family of Vehicles (FOV) Modifications	169,000	8,097,000	4,953,000
Joint Assault Bridge			34,030,000
Mortar Systems	1,500,000	1,500,000	
XM320 Grenade Launcher Module (GLM)	4,870,000	3,330,000	4,158,000
Carbine	9,144,000	7,165,000	8,004,000
Handgun	1,599,000	1,599,000	3,202,000
M777 Howitzer Modifications	7,148,000	4,595,000	4,450,000
M2 .50 cal Machine Gun Modifications	8,095,000	14,197,000	20,942,000
M119 Howitzer Modifications	28,613,000	12,563,000	1,945,000
Tactical and Support Vehicles			
Tactical Trailers/Dolly Sets	3,111,000	3,887,000	4,710,000
Semitrailers, Flatbed	160,000		

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2015	FY 2016	FY 2017
Joint Light Tactical Vehicle (JLTV)			177,728,000
Truck, Dump, 20-ton (CCE)		8,174,000	14,329,000
Firetrucks & Associated Firefighting Equipment	414,000	415,000	418,000
Family of Heavy Tactical Vehicles (FHTV)	19,570,000	16,556,000	39,064,000
Palletized Load System (PLS) Extended Service Program (ESP)	36,598,000	61,949,000	
Modification of In-service Equipment	17,904,000		
Communications and Electronics Equipment			
Warfighter Information Network-Tactical (WIN-T) - Ground Forces Tactical Network	150,338,000	155,227,000	146,591,000
Joint Incident Site Communications Capability	7,915,000	5,116,000	5,232,000
Transportable Tactical Command Communications		10,009,000	9,135,000
SHF Term	3,867,000		
SMART-T (Space)	4,400,000		
Global Broadcast Service (GBS)	3,250,000		
Joint Tactical Radio System	44,800,000	85,983,000	89,283,000
Army Materiel Command (AMC) Critical Items - OPA-2	12,446,000	20,275,000	17,356,000
Tactical Communications and Protective System	4,395,000		
Unified Command Suite	17,445,000	17,035,000	17,529,000
Family of Medical Communications for Combat Casualty Care	12,171,000	10,490,000	18,191,000
Communications Security (COMSEC)	6,163,000	4,133,000	5,057,000
Prophet Ground	8,927,000	29,305,000	
Distributed Common Ground System - Army (DCGS-A) (MIP)	24,742,000	54,990,000	49,711,000
Counterintelligence (CI) and Human Intelligence (HUMINT) Automated Reporting and Collection System (CHARCS) (MIP)	665,000	684,000	700,000
Lightweight Counter Mortar Radar	8,810,000	8,397,000	16,287,000
Sentinel Modifications	36,926,000	11,268,000	9,212,000
Night Vision Devices	72,671,000	102,310,000	52,794,000
Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Range Finder (MLRF)	8,500,000	5,000,000	4,000,000
Indirect Fire Protection Family of Systems	14,000,000	23,656,000	15,633,000
Family of Weapon Sights (FWS)	10,000,000	21,854,000	24,531,000
Artillery Accuracy Equipment	1,700,000	784,000	
Profiler	1,475,000	1,570,000	
Joint Battle Command - Platform (JBC-P)	15,173,000	15,123,000	16,565,000
Joint Effects Targeting System (JETS)	11,000,000		
Modification of In-service Equipment (Lightweight Laser Designator/Rangefinder [LLDR])	5,725,000	5,843,000	6,080,000
Mortar Fire Control System	4,593,000		
Counterfire Radars	209,050,000	160,100,000	47,796,000
Fire Support Command & Control (C2) Family	2,553,000	2,662,000	1,585,000
Air & Missile Defense Planning and Control System (AMDPCS)	15,886,000	13,108,000	26,832,000
Network Management Initialization and Service	5,313,000	2,538,000	2,428,000
Maneuver Control System (MCS)	35,681,000	49,735,000	48,375,000
Global Combat Support System - Army (GCSS-A)	27,726,000	30,307,000	28,766,000
Reconnaissance and Surveying Instrument Set	5,809,000	6,562,000	6,714,000

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Table 3

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2015	FY 2016	FY 2017
Items Less Than $5M (Surveying Equipment)	1,704,000	1,128,000	367,000
Other Support Equipment			
CBRN Defense		9,836,000	9,487,000
Tactical Bridge - Float Ribbon		5,796,000	21,061,000
Ground Standoff Minefield Detection System (GSTAMIDS)	6,405,000		
Husky Mounted Detection System (HMDS)	4,080,000		
Robotic Combat Support System (RCSS)		3,215,000	
Explosive Ordnance Disposal (EOD) Equipment	3,013,000	5,010,000	7,421,000
Remote Demolition Systems	819,000	3,102,000	
Items Less Than $5M (Countermine Equipment)	2,381,000	1,414,000	1,525,000
Heaters and Environmental Control Units (ECUs)	3,115,000	6,046,000	8,075,000
Ground Soldier System	10,660,000	9,918,000	12,311,000
Field Feeding Equipment	10,780,000	10,681,000	3,744,000
Cargo Aerial Delivery & Personnel Parachute System	1,400,000	264,000	264,000
Family of Engineer Combat and Construction Sets	17,714,000	14,813,000	12,304,000
Items Less Than $5M (Engineer Support)	5,939,000	2,908,000	1,709,000
Quality Surveillance Equipment		1,343,000	1,370,000
Distribution Systems, Petroleum & Water	19,733,000	28,650,000	24,408,000
Combat Support Medical	11,052,000	16,123,000	12,026,000
Mobile Maintenance Equipment Systems	10,967,000	11,965,000	11,965,000
Items Less Than $5M (Maintenance Equipment)	1,323,000	1,318,000	1,318,000
Grader, Road Mtzd, Heavy, 6x4, (CCE)		1,063,000	1,786,000
Scrapers, Earthmoving		9,159,000	15,769,000
Compactor	1,617,000		
Tractor, Full Tracked	13,464,000		
All Terrain Cranes	4,938,000	13,095,000	8,203,000
Plant, Asphalt Mixing	667,000		
Enhanced Rapid Airfield Construction Capability (ERACC)	7,515,000	7,488,000	5,507,000
Construction Equipment ESP	9,565,000	16,356,000	16,513,000
Items Less Than $5M (Construction Equipment)	4,405,000	1,742,000	4,059,000
Generators and Associated Equipment	53,104,000	140,317,000	72,004,000
Family of Forklifts	3,199,000	3,849,000	3,180,000
Training Devices, Nonsystem	10,395,000	32,304,000	38,269,000
Close Combat Tactical Trainer	4,746,000	12,629,000	7,144,000
Aviation Combined Arms Tactical Trainer	4,395,000	9,133,000	8,751,000
Gaming Technology in Support of Army Training	4,700,000	5,563,000	5,242,000
Calibration Sets Equipment	2,173,000	2,173,000	1,989,000
Integrated Family of Test Equipment (IFTE)	10,842,000	11,761,000	6,537,000
Test Equipment Modernization (TEMOD)	7,067,000	7,151,000	6,718,000
Modification of In-service Equipment (OPA-3)	3,713,000	2,677,000	4,425,000
Army Materiel Command (AMC) Critical Items - OPA-3	4,542,000	9,016,000	5,899,000
Total	**$1,869,453,000**	**$2,035,906,000**	**$2,249,640,000**

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014[1]
FY 2012 NGREA Equipment[2]			
Training Systems (Simulators, Training Systems)	$105,292,181		
Domestic Operations (Chemical/Radiation Detection, Decontamination Systems)	67,170,275		
Engineer (General Engineering Equipment)	55,911,311		
Aviation (Support Equipment, Imaging Systems, Unmanned Aerial Systems, Fuel Tanks, Light Utility Helicopters)	37,113,373		
Medical (Field Medical, Medical Equipment Sets)	31,402,149		
Logistics (Field Feeding, Field Services, Liquid Logistics, Test and Measurement Support Devices)	23,377,044		
FY 2013 NGREA Equipment			
Aviation			
Reduced Size Extended Range Fuel System (RSERFS) B-Kit (CH-47)		$14,498,348	
A-Kit Upgrade Forward Looking Infrared Radar (FLIR) (UH-60)		4,500,000	
B-Kit Upgrade Forward Looking Infrared Radar (FLIR) (UH-60)		13,740,000	
A-Kit Internal Auxiliary Fuel Tank System (UH-60)		900,000	
B-Kit Internal Auxiliary Fuel Tank System (UH-60)		3,400,000	
Micro-Flare Kit Internal Auxiliary Fuel Tank System (UH-60)		3,120,000	
Security and Support (S&S) Retrofit Mission Equipment Package (MEP) (UH-72)		1,677,296	
Engine Inlet Barrier Filter UH-72A		1,171,500	
Blade Folding System		234,000	
Domestic Operations			
Chemical Biological Protective System M8E1		43,293,840	
Dismounted Communication Strike Kit (Small)		19,477,168	
Decontamination Trailer Mobile Mass C-130 Deployable (HRF/CERFP)		3,847,964	
ALS Computer Subsystem Modernization		1,702,560	
Engineering			
Hydraulic Excavator (HYEX)		5,183,603	
Intelligence			
Sensitive Compartmented Information Facility (SCIF) Systems		9,000,000	
Logistics			
Multi-Temperature Refrigerated Container System (MTRCS)		7,000,000	
Assault Kitchens		2,575,000	
Maintenance			
Maintenance Support Device		4,536,000	
Hydraulic System Test and Repair Unit (HSTRU)		4,025,000	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2012	FY 2013	FY 2014[1]
Training			
Virtual Convoy Operations Trainer (VCOT) C4		57,946,750	
Individual Gunnery Trainer Brigade Combat Team Weapons Package Upgrade Sets		40,682,174	
Close Combat Tactical Trainer - Dismounted Soldier System		14,500,000	
Deployable Force-on-force Instrumented Range System (DFIRST 3.0) FLEXTRAIN System		12,189,549	
Mission Command System		5,088,572	
Tabletop Trainer (RWS-TT) (Stryker Remote Weapon System)		1,305,337	
Training/Aviation			
Aviation Combined Arms Tactical Trainer (AVCATT) Module (LUH)		31,999,979	
Synthetic Flight Simulator (UH-72A)		14,000,000	
Transportable Blackhawk Operations Simulator (TBOS) UH-60M		10,000,000	
Maintenance Trainer (LUH) Virtual		4,090,361	
Maintenance Trainer (LUH)		3,200,000	
Universal Mission Simulator (Shadow Crew Trainer)		1,392,000	
Transportation			
5-ton Wrecker (M1089A1P2)		52,463,322	
HMMWV Ambulances Integration Efforts		45,000,000	
Truck Tractor (M1088A1P2)		22,259,677	
Total	**$320,266,333**	**$460,000,000**	

1. Service FY 2014 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2014 will be provided in next year's NGRER.

2. A decrement of $4,733,000 was applied to ARNG FY 2012 NGREA due to FY 2013 sequestration reduction allocation.

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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 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Air Defense					
Computer: Tactical AN/GYQ-88	C77755		+43		
Radar Set: Sentinel AN/MPQ-64A1	G92997		+5		
Aviation					
Tester: Pitot and Static Systems TS-4463/P	T03597		+32		
Battle Command (Command & Control)					
Computer Set: Digital AN/GYK-62	C13866		+37	+19	
Computer Set: Digital AN/UYK-128	C18378		+4,140		
Computer System: Digital AN/PYQ-13 (GCCS-A)	C27588		+16		
Computer System: Digital	C27963		+8		
Generator Set: DED 60kW 50/60Hz Skid-mtd	G63256		+68		
Generator Set: DED TM 5kW 60Hz mtd on M116A2 PU-797	G42238		+10		
Generator Set: DID 5kW 50/60Hz Skid-mtd	G42488			+50	
Generator Set: DED Skid-mtd 5kW 60Hz	G11966		+7		
Generator Set: DED 60Hz AC MEP-531A	G36237		+57	+21	
Generator Set: 10kW 50/60Hz Skid-mtd	G07461		+24	+10	
LTT Trailer-mtd: PU-2001 5kW 50/60Hz	L26934		+32		
LTT Trailer-mtd: PU-2003 15kW 50/60Hz	L84690		+4		
Power Supply: PP-6224/U	P40750		+280		
Trailer-mtd: PP-3106 60kW 50/60Hz 2M200A1	T93232		+4	+1	
Trailer-mtd: PU-2101 15kW 50/60Hz M200A1	T40090		+22	+7	
Battlespace Awareness					
Data Analysis Central: AN/MSW-24	D77801		+7	+3	
Detecting System Countermeasures: AN/MLQ-40(V)4	D04182		+20		
Battle Command Transport Networks					
Battalion Command Post Switching Group: OM-XXX	B67234		+38	+18	
Frequency Hopipng Multiplexer: TD-1456VRC	F99520		+135	+32	
Joint Node Network (JNN) Central Office Telephone Auto: AN/TTC	J05001		+9	+4	
Net Control Station: AN/TSQ-158	N04580		+6	+10	
Radio Set	R55336		+10		
Radio Set, Grid Reference: AN/GRC-229D	R91580			+5	
Radio Set: AN/PRC-119F(C)	R83141		+377	+27	
Radio Set: AN/VRC-87F(C)	R67296		+10		
Radio Set: AN/VRC-88F(C)	R67330		+18		
Radio Set: AN/VRC-89F(C)	R44999		+569	+22	

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Table 5

Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Radio Set: AN/VRC-90F(C)	R68044		+177		
Radio Set: AN/VRC-91F(C)	R68146		+17		
Radio Set: AN/VRC-92F(C)	R45543			+246	
Radio Set: AN/VSQ-2D(V)2	P99724		+89		
Teleconference System: AN/TYQ-122	T43146		+66		
Combat Mobility					
Assault Breacher Vehicle (ABV)	A05001		+6		
Boat Bridge Erection Inboard Engine: Shallow Draft	B25476		+9		
Field Logistics					
Advanced Aviation Forward Area Refueling System (AAFARS)	F42611		+6		
Hydraulic System Test and Repair Unit (MX3)	H05002		+16	+3	
Load Handling System (LHS) Compatible, 2000-gal Water Tank Rack (HIPPO)	T32629		+170		
Truck Hand Platform: Wood Nontilt Type	X47818		+111	+3	
Truck Lift Fork: DED 6000-lb Cap Rough Terrain	X48914		+6		
Truck Lift Fork: Gas 4000-lb	X51585		+3	+10	
Truck Lift Wheel: Mechanical Lift 2400-lb	X53298		+143		
Truck Lift Fork Variable Reach Rough Terrain	T73347		+64		
Water Purification: Reverse Osmosis 3000-gph Trailer-mtd	W47225		+10		
Force Protection					
Chemical-Biological Protective Shelter (CBPS): M8	C07506		+49		
Joint Chemical Agent: Detector	J00697		+558	+127	
Chemical-Biological Joint Service General Purpose Mask (JSGPM): Field M50	M12986		+948	+59	
Chemical-Biological JCGPM: Combat Vehicle Crewman M51	M13236		+112		
Medical Field Systems					
Medical Equipment Set (MES) Combat Medic	U65480		+25	+6	
Soldier Systems					
Basic Sight Assembly: Support Equipment (TOW 2)	B39044		+4	+1	
IHADSS Integrated Helmet Unit	H35257		+64		
Laser: Target Locator Module	L05003		+454		
Target Locator Module	T27471		+186	+10	
Unmanned Ground Vehicle Tracked: XM216	U31832			+3	
Strike					
Computer Set: AN/GYG-1(V)1	C17936		+23		
Computer System: Digital AN/PYG-1	C53293		+62	+24	
Quadrant Fire Control: Gunners	Q03468		+11		
Lightweight Laser Designator Rangefinder (LLDR): AN/PED-1	R60282		+194		
Trailers					
Semitrailer Flatbed: Breakbulk/Container Transporter Commercial 34-ton	S70159		+101		
Semitrailer Low-bed: 15 to 25 ton 4-wheel	S70380		+5		

Table 5

ARNG

Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Semitrailer Low-bed: 25-ton 4-wheel W/E	S70517		+9	+5	
Trucks					
Truck Cargo: Tactical 8X8 Heavy Expanded Mobility w/LHS	T96496		+22	+1	
Truck Utility ECV TOW/ITAS Carrier with IAP Armor-ready: M1167	T34840		+36		
Truck Wrecker: M984A4	T63161		+12	+13	

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Table 6

FY 2010 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2011 Planned Transfers & Withdrawals							
ARNG indicated no planned transfers or withdrawals in the FY 2011 NGRER.							
FY 2011 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 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($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 Command 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 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($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 2011 NGREA Equipment							
Battle Command (Standard Integrated Command Posts, Global Broadcast System)						$78,073,492	$78,073,492
Aviation (FLIR Star Imaging System, Ground Support Equipment, Rescue Hoist, LUH MEP)						58,980,480	58,980,480
Engineering Equipment (Light Loader, Low Speed Bulldozer)						38,506,000	38,506,000
Force Protection (Chemical Detection, Decontamination Trailer)						35,306,257	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	30,932,981
Tactical Power Generation/Distribution (PDISE Generators)						8,199,240	8,199,240
Total				**$3,335,725,000**	**$3,731,628,000**	**$249,998,450**	**$249,998,450**

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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 deployable in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired equipment item.

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes[1]	No
Aviation						
Survival Kit Aircraft: 2-man Aircraft Modular Survival System (AMSS)	S72943	Survival Kit Individual: Hot Climate	U72549	15	X	
Survival Kit Aircraft: 2-man AMSS	S72943	Survival System, Aircraft Personnel	BB8056	13	X	
Battle Command (Command and Control)						
Gen Set: DED Skid-mtd 3kW 60Hz	G18358	Gen Set: DED Skid-mtd 5kW 60Hz	G11966	127	X	
Gen Set: DED Skid-mtd 3kW 60Hz	G18358	Gen Set: DED 60Hz AC MEP-531A	G36237	175	X	
Gen Set: DED Skid-mtd 3kW 60Hz	G18358	Generator Diesel	FD1500	186	X	
Computer Set, Digital: AN/UYK-128	C18378	Computer, Digital: 3400 Digital Equipment	FJ211E	250	X	
Power Supply: PP-6224/U	P40750	Power Supply: PP-2953/U	P38588	634	X	
Power Supply: PP-6224/U	P40750	Power Supply Assembly, TYX	63026N	1,759	X	
Power Supply: PP-6224/U	P40750	Power Supply: PP-8564/GRC	P40745	115	X	
Battlespace Awareness						
Detecting System Countermeasures: AN/MLQ-40(V)4	D04182	Detecting System: Countermeasures AN/MLQ-40(V)1	D02704	13	X	
Battle Command Transport Networks						
Radio Set: AN/VSQ-2D(V)2	P99724	Radio Set: AN/VSQ-2D(V)1	P49587	122	X	
MBITR: Urban Version	M18029	Radio Set, Hand-held, PK2GAX	FA2079	228	X	
Radio Set: AN/VRC-88F(C)	R67330	Radio Set: AN/VRC-88A	R67194	676	X	
Radio Set: AN/VRC-88F(C)	R67330	Radio Set: AN/VRC-88D	R67262	206	X	
Radio Set: AN/VRC-89F(C)	R44999	Radio Set: AN/VRC-89A	R44863	1,169	X	
Radio Set: AN/VRC-89F(C)	R44999	Radio Set: AN/VRC-89D	R44931	440	X	
Radio Set: AN/VRC-90F(C)	R68044	Radio Set: AN/VRC-90A	R67908	12,175	X	
Radio Set: AN/VRC-90F(C)	R68044	Radio Set: AN/VRC-90D	R67976	5,938	X	
Radio Set: AN/VRC-91F(C)	R68146	Radio Set: AN/VRC-91A	R68010	3,330	X	
Radio Set: AN/VRC-91F(C)	R68146	Radio Set: AN/VRC-91D	R68078	1,157	X	
Radio Set: AN/VRC-92F(C)	R45543	Radio Set: AN/VRC-92A	R45407	1,309	X	
Radio Set: AN/VRC-92F(C)	R45543	Radio Set: AN/VRC-92D	R45475	951	X	
Radio Set: AN/PRC-119F(C)	R83141	Radio Set: AN/PRC-119A	R83005	953	X	
Radio Set: AN/PRC-119F(C)	R83141	Radio Set: AN/PRC-119D	R83073	454	X	
Field Logistics						
Truck Lift Fork: Gas 4000-lb	X51585	Truck Lift Fork: DED 4000-lb Rough Terrain (RT)	T49255	47	X	
Truck Lift Fork: Gas 4000-lb	X51585	Truck Lift Fork: DED 6000-lb Variable Reach RT Ammo Handling	T48944	24	X	
Truck Lift Fork: Gas 4000-lb	X51585	Truck Forklift	LF3002	13	X	
Truck Lift: Fork Variable Reach RT	T73347	Truck Lift Fork: DED 6000-lb Variable Reach RT Ammo Handling	T48944	66	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 2015 Qty	Deployable?	
					Yes[1]	No
Truck Lift Fork: Variable Reach RT	T73347	Truck Lift Fork: DED 10000-lb RT	T49119	13	X	
Load Handling System Compatible: 2000-gal Water Tank-rack (HIPPO)	T32629	Forward Area Water Point Supply System (FAW SS)	F42612	14	X	
Tool Outfit Hydraulic System: Test and Repair 3/4-ton Trailer-mtd	T30377	Hydraulic System Test and Repair Unit (MX3):	H05002	22	X	
Truck Lift Fork: DED 6000-lb CAP Rough Terrain	X48914	Truck Lift Fork: DED 6000-lb Variable Reach RT Ammo Handling	T48944	7	X	
Tank Unit Liquid Dispensing Trailer Mounting	V19950	Tank Liquid Storage Metal: Petro Products Skid-mtd 600-gal	V15566	47	X	
Force Protection						
Joint Chemical Agent: Detector	J00697	Alarm Chemical Agent Automatic: Portable Manpack M8A1	A32355	11	X	
Battlefield Anti-intrusion System: AN/PRS-9	B57077	Platoon Early Warning System: AN/TRS-2(V)	P06148	12	X	
Mask Chemical-Biological Joint Service General Purpose: Field M50	M12986	Mask Chemical-Biological: M40	M12418	16,674	X	
Mask Chemical-Biological Joint Service General Purpose: Field M50	M12986	Mask Chemical-Biological: Combat Vehicle M42	M18526	36	X	
Joint Chemical Agent: Detector	J00697	Alarm: Chemical Agent Automatic M22	A33020	41	X	
Medical Field Systems						
Medical Equipment Set (MES) Combat Medic	U65480	Surgical Instrument and Supply S	NA452N	64	X	
Soldier Systems						
Mini Eyesafe Laser Infrared Observation Set (MELIOS): AN/PVS-6	M74849	Binocular, Laser Range Finder	GA4020	20	X	
MELIOS: AN/PVS-6	M74849	Laser Range Finders	GA4004	62	X	
MELIOS: AN/PVS-6	M74849	Laser	FA6007	195	X	
MELIOS: AN/PVS-6	M74849	Laser: Target Locator Module	L05003	541	X	
MELIOS: AN/PVS-6	M74849	Target Locator Module	T27471	883	X	
Strike						
Laser Designator Rangefinder: AN/PED-1	R60282	Target Locator Module	GA404J	10	X	
Laser Designator Rangefinder: AN/PED-1	R60282	Target Designator Set: Electro-optical (GLLD)	T26457	33	X	
Laser Designator Rangefinder: AN/PED-1	R60282	Target Locator Module	T27471	42	X	
Fire Support Team Vehicle: Bradley (BFIST)	F86571	Armored: Reconnaissance	A40164	40	X	
Fire Support Team Vehicle: Bradley (BFIST)	F86571	A3 BFIST: W/FS3	A70576	22	X	
Plotting Board Indirect Fire: Azimuth	P07900	Plotting Board	GA2003	33	X	
Computer Set: AN/GYG-1(V)1	C17936	Computer System Digital	FJ1009	72	X	
Computer Set: AN/GYG-1(V)1	C17936	Computer System Digital: AN/GYK-63(V)2 (AFATDS)	C05032	296	X	
Computer Set: AN/GYG-1(V)3	C18004	Computer System Digital: AN/GYK-63(V)2 (AFATDS)	C05032	82	X	
Computer Set: AN/GYG-1(V)3	C18004	Computer System Digital	FJ1009	20	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 2015 Qty	Deployable?	
					Yes[1]	No
Trailers						
Semitrailer Flatbed: Breakbulk/Container Transporter Commercial 34-ton	S70159	Semitrailer Flatbed: Breakbulk/Container Transporter 22-1/2 ton	S70027	24	X	
Semitrailer Flatbed: Breakbulk/Container Transporter Commercial 34-ton	S70159	Trailer, Flatbed	YF3049	10	X	
Semitrailer Low-bed: 25-ton 4-wheel	S70517	Semitrailer Low-bed: 40-ton 6-wheel	S70594	52	X	
Trucks						
Truck Wrecker: 8X8 HEMTT w/Winch	T63093	Truck Wrecker: M984A4	T63161	272	X	
Truck Wrecker: 8X8 HEMTT w/Winch	T63093	Truck Wrecker: MTV W/E W/W	T94709	10	X	
Truck Wrecker: 8X8 HEMTT w/Winch	T63093	Truck Wrecker: 5-ton 6X6 w/Winch	X63299	19	X	
Truck Wrecker	T94671	Truck Wrecker: MTV W/E W/W	T94709	15	X	
HMMWV Ambulance: 4-Litter Armored	T38844	HMMWV Ambulance: 2-Litter Armored	T38707	17	X	
Truck Utility ECV TOW/ITAS Carrier with IAP Armor-ready: M1167	T34840	Truck, Utility	YF2021	28	X	
Truck Cargo: 8X8 HEMTT w/LHS	T96496	Truck Palletized (LHS): M1120A4	T55054	1,390	X	

1. All equipment is deployable, depending upon theater requirements

ARNG

Table 8

Significant Major Item Shortages

NOTE: This table provides a RC top ten prioritized (PR) shortage list for major equipment items 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 equipment data submitted by the Service.

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	Rotary Medium Cargo (H-60M) Modernization	806	546	varies	$4,346,800,000	UH/HH-60M helicopters replace UH/HH-60A helicopters in certain ARNG formations and are Critical Dual Use (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 (EOH) with substitutes will be 100% but the projected dates for H-60A divestiture and H-60M buyout will be FY 2026 and FY 2027, respectively.
2	Chemical and Biological Protective Shelter (CBPS) M8E1	285	270	$1,000,000	$270,000,000	The NBC Force Protection Budget Operating System (BOS) consists of systems to support chemical, biological, radiological, and nuclear activities. The deliveries of four systems for ARNG are projected for FY 2014. A projected total of 15 systems are scheduled to be fielded by FY 2017.
3	Semitrailer: Flatbed 34-ton & 25-ton	5,132	1,058	$173,009	$183,043,522	The ARNG is short both 34-ton and 25-ton semitrailers. Both fleets also consist of 20 year old systems. The ARNG will require a recapitalization effort to sustain the existing 34-ton and 25-ton semitrailer fleets. The Tactical Wheeled Vehicle (TWV) Reduction Study V will reduce prime mover requirements, but the reduction will not reduce trailer transport mobility requirements for maneuver units.
4	HMMWV Ambulance Recapitalization	1,690	345	$175,000	$60,375,000	The ARNG used FY 2010 NGREA funding to purchase the 500 ambulance shortfall. By June 2015, the ARNG will have 100% of its ambulance requirements. However, a majority of the ARNG fleet is over 20 years old and requires recapitalization to extend its service life. The Army does not have a long term strategy to replace or modernize the ambulance fleet, which degrades the ARNG's readiness to support domestic operations. Recapitalizing 345 ambulances will improve the ARNG's preparedness to have fully mission capable ambulances to support civilian authorities during domestics operations.
5	Construction Engineer Equipment	10,642	5,321	varies	$230,000,000	This category includes the Heavy Crane, Dozers, Hydraulic-Electric-Pneumatic-Petroleum Operated Equipment (HEPPOE), Graders, and various types of compaction-rollers that are critically under-filled or being filled at a rate that will never achieve modernization standards. This portfolio is unique in that the Army as a whole is a very minor portion of the vendor's business. The lengthening of fielding directly hurts modernization efforts. This portfolio has been heavily reliant upon NGREA funding to meet modernization goals. The Army's Brigade Engineer Battalion Force Design Update will double the amount of engineers in each of its Brigade Combat Teams (BCTs).

ARNG

Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
6	Multi-Temperature Refrigerated Container System (MTRCS)	470	143	$140,000	$20,020,000	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.
7	Combat Mobility	NA	NA	varies	$300,000,000	This category includes countermine and bridging systems. Bridging supports CDU requirements for homeland security. The engineering equipment on-hand is aging and requires modernization. The total shortage cost in this table reflects the cost of modernizing the existing equipment.
8	Load Handling System Compatible Water Tank Rack (HIPPO)	1,104	628	$131,839	$82,794,892	The HIPPO consists of a 2,000 gallon potable water tank in an ISO frame with integrated pump, engine, alternator, hose reel, heater and fill stand. The HIPPO enhances and expedites the delivery of bulk potable water into the division and brigade areas. It provides the Army with the capability to receive, store, and distribute potable water utilizing tactical trucks. The HIPPO replaces the semitrailer-mounted fabric tank (SMFT).
9	Assault Kitchen (AK)	1,000	531	$51,500	$27,346,500	The Assault Kitchen replaces the current legacy company-level field kitchens. The AK is a mobile field-feeding platform that provides heating and serving to company-sized elements at a future force sustainment replenishment site. The AK prepares food for up to 250 personnel in 90 minutes. The AK consists of a Tray Ration Heater installed in a light tactical trailer with a high mobility multipurpose wheeled vehicle (HMMWV) as its prime mover.
10	Palletized Loading System (PLS)	2,257	371	$452,000	$167,692,000	Recapitalization is the current strategy to modernize this fleet. The Army's goal is 50% uparmored by FY 2018, and the ARNG is currently at 2%. The current fleet is over 13 years old.

* 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

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 United States 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 Army Reserve to continuously support the Army and joint force missions at home and abroad is paramount.

Top Army Reserve Focus Areas

- Obtain affordable and cost effective equipping solutions
- Resource and sustain critical equipment and support infrastructure to maintain the Army Reserve as part of an operational force
- Refine equipping strategy to support homeland defense (HD) and Defense Support of Civil Authorities (DSCA)
- Reestablish Light Tactical Vehicle (LTV) recapitalization program
- Increase Critical Dual Use level to 80 percent equipment on-hand (EOH)

a. Status of Forces as an Operational Reserve

The Army Reserve has transitioned from a strategic reserve to an operational reserve while providing continuous support to homeland defense (HD), Defense Support of Civil Authorities (DSCA), and overseas contingency operations (OCO). This paradigm shift requires sustained equipping investments to preserve the Army Reserve as an operational force essential to national defense. A substantial reduction in funding will reduce the Army Reserve's ability to effectively meet Army requirements. As such, equipment modernization must continue to ensure seamless support for joint, interagency, intergovernmental, and multinational missions, as well as maintaining capabilities to support contingency operations paramount to supporting the Army's 2020 Vision.

Modernization efforts continue to advance the Army Reserve's ability to perform its mission within all operational environments. As of FY 2013, the Army Reserve EOH percentage is 86 percent and 66 percent modernized, but the Army Reserve must continue to focus on improving critical capabilities across every equipment category. Modernization and EOH challenges persist for key enabler capabilities, such as engineer equipment, field logistics systems, force protection equipment, medical equipment, mission command systems, and transport systems. Continuous modernization investment is needed to ensure the Army Reserve remains a relevant operational force.

As equipping budgets continue to decrease, the Army Reserve is emphasizing the recapitalization of legacy systems to sustain adequate capability levels. While considerable amounts of equipment are expected to be cascaded to the Army Reserve in future years, aging fleets will drive increases in sustainment costs. Funding ceased for Light Tactical Vehicle (LTV) recapitalization in 2010 and will cease for Medium Tactical Vehicle (MTV) recapitalization at the end of FY 2013. Without sustained fleet modernization, the Army Reserve's LTV fleet will deteriorate, increasing sustainment costs while reducing the Army Reserve's ability to respond to contingency operations. Reestablishing an LTV recapitalization program is necessary to sustain the Army Reserves ability

to support HD and DSCA as well as accomplishing the Army Reserve's mission of providing the Army's operational reserve.

The Army Reserve is required to provide 24,000 Soldiers annually in support of Army Force Generation (ARFORGEN) planning requirements. The Active Component (AC) requires 90 percent of Army Reserve Soldiers to deploy within the first 45 days of contingency operations. Army Reserve Soldiers are required to support combatant command needs and provide critical enabler capabilities to theater operations. For the Army Reserve to remain a ready and operational force, it must be funded and equipped appropriately. A lack of adequate resources risks the Army Reserve's ability to conduct effective, timely, sustained operations.

b. Homeland Defense and Defense Support of Civil Authorities

The National Defense Authorization Act (NDAA) 2012 authorizes access to Army Reserve capabilities to provide DSCA support in response to 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. The Army Reserve is a valuable asset to respond to international incidents in support of the United States Agency for International Development as the lead agency from the Department of State conducting foreign consequence management operations. Additionally, the Army Reserve is engaged in the DoD planning process for complex catastrophes. All of these missions require modern 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 possesses a wide range of unique capabilities available for use in support of HD and DSCA operations (see Table 2-10). The Army Reserve has relevant and capable units for leveraging and resourcing equipment and Soldiers to provide critical capabilities needed to sustain governmental operations in relief of human suffering and minimizing property damage. Army Reserve units are decentralized, providing geographical dispersion that is not bound by state boundaries, increasing the chance of having a unit with the right capability to respond to a domestic major disaster or emergency nearby.

Table 2-10. Army Reserve Capabilities to Support HD and DSCA

Type of Unit	Number of Units	Percentage of Total Army
Mortuary Affairs	6	75%
Civil Affairs	46	70%
Quartermaster	144	64%
Medical	216	59%
Transportation	300	44%
Chemical	50	43%
Engineer	288	31%
Military Police	113	24%
Signal	20	17%
Aviation	29	5%

The Army Reserve provides a significant portion of the Army's contingency response force. As such, those designated units rely on Critical Dual Use (CDU) equipment to accomplish a wide array of missions and 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. CDU equipment comprises those items that support operational requirements and enable the Army to assist civil authorities in responses to natural disasters, acts of terrorism, and other manmade disasters identified in planning scenarios.

The Army Reserve contributes a range of capabilities to the chemical, biological, radiological, and nuclear (CBRN) response enterprise. The Army Reserve provides the capability to respond to multiple 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, quartermaster units, engineer units, transportation units, and chemical/biological detection units. These units provide DSCA support to a lead Federal agency in the event of a CBRN attack on our Nation.

2. Status of Equipment

a. Equipment On-hand

Over the last decade, modernization efforts have improved the Army Reserve's equipping posture and ability to perform its mission within all operational environments. This is evident in the increase of Army Reserve EOH from less than 78 percent in FY 2006 to 86 percent in FY 2013. To meet readiness requirements, the Army Reserve internally cross-levels equipment to ensure units meet aim points associated with the ready and available pools of the ARFORGEN process. The Army Reserve also mitigates EOH shortages and enhances modernization with cascaded equipment and by filling programmed procurement gaps with NGREA funding. Fiscal constraints hinder efforts to increase EOH and improve modernization levels, which are necessary to control sustainment costs of legacy equipment. Equipment shortfalls and modernization challenges present unresourced requirements, which adversely impact readiness, as demonstrated by a developing LTV capability gap. The majority of the LTV fleet has surpassed its economic useful life. Without an ongoing recapitalization program to extend service life, the cost of maintaining this fleet will dramatically increase with time. Equipment and modernization funding levels will need to be restored to support operational requirements in order to prevent jeopardizing the Army Reserve as an enduring operational force. Table 2-11 highlights the Army Reserve's top capability modernization shortages.

Table 2-11. Army Reserve Top Capability Modernization Shortages

Equipment	FY 2017 Total Requirement	FY 2017 Modern Equipment On-hand	FY 2017 Modern Shortage	Percentage Modernized
Battle Command Transport Networks	99,958	33,278	66,680	33%
Tactical Wheeled Vehicles	39,132	20,715	18,417	53%
Aircraft	283	183	100	65%
Engineering Equipment	15,383	11,080	4,303	72%

b. Average Age of Major Items of Equipment

The implementation of the budget control act imposed additional fiscal constraints resulting in the utilization of equipment beyond its intended life cycle. Substantially declining budgets and rapidly developing technologies continuously increase modernization gaps that were deferred during a decade at war. Efforts to maintain aging fleets beyond the intended life cycle generates cascading effects reflected in higher sustainment costs and deferred upgrades to repair facilities. Mitigating strategies to reduce the average age of equipment include recapitalization programs to modernize equipment and the Army Reserves' rebuild program designed to extend the service life of combat support (CS) and combat service support (CSS) enabling systems by rebuilding equipment to like-new conditions. Resourcing recapitalization and rebuild programs remains essential for incrementally replacing legacy systems and decreasing the average age of Army Reserve equipment. Table 2-11 highlights the average age of major items of the Army Reserve fleet. The Army Reserve continues to purge its fleet of aging and obsolete equipment to reduce the average age and sustainment cost. Table 2-12 provides a list of the Army Reserve top five legacy equipment items.

Table 2-12. Army Reserve Top Five Legacy Equipment

Nomenclature	Line Item Number	Average Age (years)
Semitrailer – 25-ton	S70517	53
Rough Terrain Forklift – M10A	T49119	30
Water Purification System	W47225	29
Truck Ambulance – HMMWV	T3884	25
Truck Tractor – M915	T61103	21

c. Compatibility of Current Equipment with the Active Component

The Army prioritizes equipment resourcing based on first deployers, regardless of component. Over the past several years, the Army has greatly improved the compatibility and modernization of Army Reserve equipment. However, some units will continue to have legacy equipment. While the Army Reserve has explored initiatives to mitigate these compatibility differences for deploying units through internal cross-leveling during pre-mobilization preparations, redistributing equipment is not an affordable or cost-effective solution since it consistently consumes limited financial resources. The invaluable support the Army Reserve has received through National Guard and Reserve Equipment Appropriation (NGREA) funding has enabled us to focus selected procurements on filling modernization gaps and equipment shortages.

d. Maintenance Issues

The Army Reserve's depot maintenance programs rebuild equipment to like-new conditions with zero miles and zero hours. A consistent yearly decrease in depot maintenance spending prevents aging fleets, including large amounts of CDU equipment, from being rebuilt. The depot maintenance budget was reduced from $247M in FY 2012, to $162M in FY 2013 and is projected to be $59M in FY 2014. This reduction in funding will hinder Army Reserve fleet modernization efforts. Equipment operation and sustainment cost increases are commensurate with the reduction in rebuild efforts as legacy equipment becomes more challenging and costly to maintain, thus

decreasing readiness levels. As a result, readiness rates will suffer and safety concerns will increase. Increasing the emphasis on depot maintenance ensures equipment is available and ready for all missions.

The following initiatives are examples of Army Reserve collaboration with industry to design and implement total rebuild and refurbishment programs for CDU equipment (see Table 2-13).

Table 2-13. Equipment Rebuild

Nomenclature	Line Item Number	Current On-hand	Percent of Army Capability	Average Age	Required Rebuild	Cost
Fuel Tanker M967A1	S10059	1,021	68%	27	50	$2.1M
Heavy Truck M1097A2	T07679	10,303	10%	12	200	$11.5M
Medium Truck M915A3	T61103	1,343	41%	18	30	$4.5M
Forklift 10K	T73347	900	90%	11	72	$6.9M

e. Modernizing the Tactical Wheeled Vehicle Fleet

The Army is taking strides to improve the modernization of major end items, including TWVs that are being fielded new or recapitalized through national level maintenance programs. Modernization efforts have proven successful in improving the MTV and Heavy Tactical Vehicle (HTV) fleets. Despite accomplishments in modernizing MTV and HTV fleets, the Army Reserve requires $2.2B to fill LTV modernization shortages to 100 percent of the authorized 19,990 vehicles. The recapitalization program for modernizing the HMMWV fleet ceased in FY 2010. A significant modernization shortfall is developing within the LTV fleet, including armor-capable and ambulance HMMWVs. The Army Reserve anticipates fielding the Joint Light Tactical Vehicle (JLTV) in FY 2022 at a ratio of one JLTV for every three HMMWVs. As a result, the Army Reserve is projected to maintain the HMMWV within the LTV fleet through FY 2045. The absence of a recapitalization program to modernize the LTV fleet will generate a significant increase in sustainment costs and degrade readiness. Efforts to improve the HTV fleet increased the heavy expanded mobile tactical truck (HEMTT) modernization level to 50 percent and the M915 line haul tractor to 40 percent modernized.

B. Changes since the Last NGRER

1. Budget

The Army Reserve’s procurement funding allocation decreased by 31% between the FY 2013 and FY 2014 President’s Budgets (from $660M to $454M). This reduction is part of a larger trend as the Army Reserve’s procurement funding decreased by 73% between the FY 2011 and FY 2014 President’s Budget (from $1,686M to $454M). Through FY 2017, base budget allocations are projected to improve slightly, but remain well below levels required to maintain an enduring operational Army Reserve.

2. Rebalancing of Army Reserve Capabilities

Changes in aviation, engineering, and chemical force structure have triggered unit conversions, thus changing equipment requirements. For example, Army Reserve aviation capabilities are converting Attack and Reconnaissance Aviation to Assault and Medical Evacuation (MEDEVAC) resulting in equipment conversions and modifications to fulfill new mission requirements.

3. Army Reserve Equipping Strategy

The Army Reserve's Equipping Strategy is concurrent with the Army's Equipping and Modernization Strategy. The Army's Equipping and Modernization Strategy directs that Army components receive the right equipment, delivered to the right units, at the right location, at the lowest cost. The Army Reserve will achieve equipping and modernization standards through three lines of effort, which include equipping units for assigned missions, increasing readiness by cascading equipment from the AC, and, where possible, exploring cost-effective and affordable equipping solutions.

The Army Reserve will continue to rely on cascaded equipment to fill equipment shortages. Rebuilding cascaded equipment through national-level maintenance and recapitalization programs prior to delivery and receipt by the Army Reserve remains vital to maintaining readiness levels and reducing operation and maintenance costs.

The Army Reserve will continue to support the Army's Equipping and Modernization Strategy by exploring cost effective and affordable equipping and modernization solutions to fill shortages and close modernization gaps. This will ensure the Army Reserve remains an operational force that is versatile in supporting the Army's role in the national defense strategy. These lines of effort will augment current initiatives to increase CDU capabilities concurrent with stated goals of ensuring Army Reserve units possess the right equipment, at the right place and time, for delivering unique capabilities globally in support of the full spectrum of Army operations.

4. Equipping Successes

In FY 2013, the Army Reserve received equipment valued in excess of $1.67B to fill equipment shortages and modernization requirements, while simultaneously purging $386M of obsolete and legacy equipment from the inventory. Congressional support via NGREA provided funding for logistics, mobility and medical capabilities, to include the purchase of $15M in container handling equipment, $14M in tactical generators and $130M in recapitalization for the HTV fleet. The Army Reserve also rebuilt 70 percent of its MTV fleet and 83 percent of its semi-trailer tankers. The quality and quantity of equipment received enhances interoperability with joint, interagency, intergovernmental, and multi-national partners, in support of global operations. In addition, efforts to improve and sustain modernization of CDU equipment enables the Army Reserve to employ unique capabilities required to serve as a life saving and life sustaining force for the Nation, in response to DSCA requests and HD missions.

C. Future Years Program (FY 2015–FY 2017)

1. New Equipment Procurements

a. Base Budget

Based on FY 2014 President's Budget request, the Army Reserve procurement funding is projected to receive a 60 percent budget reduction between FY 2015 ($739M) and FY 2018 ($293M). Continued budget decrements will hasten EOH and modernization shortcomings across every Army Reserve equipping category, risking momentum achieved in transforming the Army Reserve to an operational force and readiness gains realized during a decade of war.

b. National Guard Reserve Equipment Appropriation

The Army Reserve has used NGREA funding to increase modernization and EOH. NGREA has enabled the Army Reserve to procure the most modernized combat support and combat service support equipment to fill those critical equipment shortages not scheduled for procurement. Over the last three years (FY 2012–FY 2014), the Army Reserve has received $560M in NGREA, enhancing modernization by filling gaps in the base budget. Additionally, NGREA funding has supported efforts to improve equipment modernization in CDU items, enabling the Army Reserve to serve as one of the first Title 10 responders in support of HD and DSCA.

2. Anticipated Transfers from Active Component to Reserve Component

Table 5 reflects equipment transfers from AC to the Army Reserve from FY 2015–FY 2017.

3. Anticipated Withdrawals from Army Reserve Inventory

The Army Reserve does not anticipate any equipment withdrawals of major end items. The Army continues to ensure any withdrawals are paid back as quickly as possible.

4. Simulators

The Army Reserve continues to pursue Live, Virtual, Constructive, and Gaming (LVC/G) simulation technologies as an interim and affordable solution to mitigate equipment modernization shortfalls. This enables the Army Reserve to sustain proficiency levels obtained during a decade of combat operations in Afghanistan and Iraq, while ensuring the Army Reserve maintains an interoperable capability to support future combat operations and increases responsiveness to HD and DSCA missions. Using simulations to close training gaps formed due to equipment and modernization shortages mitigates risk in producing unique capabilities. Examples of simulators used to close modernization gaps in the Army Reserve mission command and medical capabilities include

- Multiple Amputee Training Simulator (MATS): This simulator is essential in providing realistic home station events-based training to the Army Reserve's 20,000 emergency medical technicians and combat medics. The MATS afford medical personnel a capability to maintain individual certifications, sustain stand-alone Soldier skills proficiency, and support collective lane training events.

- Home-station Instrumentation Training System (HITS): Designed to introduce instrumentation into local live training events, HITS consists of an interim range, vehicle

radio, Soldier radio, field after-action-review kit, and exercise control and operator workstation. HITS is a crucial training system that will enhance and improve the collective maneuver training for platoon through battalion units.

5. Equipment Shortages and Modernization Shortfalls

The following sections highlight Army Reserve equipment shortages and modernization shortfalls for each of the eleven Army Reserve 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 5 percent of the total Army's aviation force with a current requirement of 205 fixed-wing and rotary-wing airframes. In FY 2013, the Army Reserve possessed 97 percent of its required airframes, and the current inventory is sufficient to meet mission requirements.

The 2012 NDAA allows the Army Reserve to leverage aviation capabilities to perform lifesaving, property protection, and damage mitigation in support of HD and DSCA missions.

The Army Reserve's CDU list provides the Army and DoD with Army Reserve aviation capabilities to respond to HD and DSCA mission requirements. In FY 2017, 100 percent of the Army Reserve's aviation capabilities will be CDU capable and will continue to play a vital role in supporting HD and DSCA missions.

The conversion of Army Reserve aviation from Attack and Reconnaissance to Assault and MEDEVAC is scheduled to be completed by the end of FY 2017. Through the conversion, Army Reserve aviation will receive 48 Blackhawk utility helicopters (UH-60s), thus rebalancing and modernizing Army Reserve aviation capabilities to remain an operational force available to support all missions, including combat operations. Ongoing initiatives that directly impact the Army Reserve aviation capabilities include the following:

- The HH-60 (Blackhawk) MEDEVAC units' authorizations will increase from 12 to 15 aircraft in FY 2016.

- The FY 2013 President's Budget will modernize an aging CH-47D fleet. Modernization efforts will replace all Army Reserve CH-47D models with the latest CH-47F model. Army Reserve's CH-47 fleet is projected to be 100 percent modernized by the end of FY 2017.

- The fixed-wing fleet is currently short four C-12 aircraft. Efforts to implement affordable solutions are awaiting HQDA rebalancing decisions. The legacy UC-35 fleet remains 100 percent on-hand.

b. Mission Command

Network Transport and Mission Command Systems: This portfolio consists of transport, applications, enabler, and integration capabilities designed to facilitate digital planning, information sharing, and provide immediate connectivity of all echelons on the battlefield. The Army Reserve has made significant strides in critical network transport systems, fielding

100 percent of Warfighter Information Network–Tactical (WIN-T) requirements, and is on pace to complete fielding of Secure Mobile Anti-Jam Reliable Tactical Terminal, Global Broadcast Service, and Phoenix systems in FY 2014. However, budget decrements will delay fielding for other key network applications and enablers, such as Command Post of the Future, Blue Force Tracker, Battle Command Sustainment Support System, Distributed Common Ground System–Army, and Global Combat Support System–Army to FY 2017 or beyond.

c. Field Logistics Systems

The Army Reserve provides over 50 percent of the logistical capabilities for the Army, including supply and services, field and sustainment maintenance, transportation, health services, mortuary affairs, and aviation lift support. The Army Reserve field logistics capabilities are CDU items essential for providing emergency assistance when requested by state governors and the President of the United States.

- **Quartermaster**: As an operational force, the Army Reserve provides 66 percent of the total quartermaster deployable capability for the Army in support of combat operations, HD, and DSCA missions. Equipping efforts have increased on-hand quantities and modernization of critical quartermaster systems. Despite improvements, critical shortages in modernized quartermaster equipment remain. Critical unresourced modernization and equipment shortages exist through FY 2019, thus impacting the Army Reserve's ability to provide logistical support and services for OCO, HD, and DSCA. Significant modernization requirements and equipping shortages include Load Handling System Compatible Water Tank Rack (HIPPO), Forward Area Water Point Supply System (FAWPSS), material handling equipment, and Petroleum Quality Analysis System–Enhanced (PQAS-E) (see Table 2-14). Resources required to fulfill modernization and equipment shortages exceed $205M.

Table 2-14. Quartermaster/Maintenance Systems

Equipment	FY 2017 required	FY 2017 on-hand	FY 2017 modern on-hand	FY 2017 modern shortage	Unresourced requirement
Liquid Logistics	4,800	3,954	3,905	895	$80.6M
Maintenance (Aviation)	1,424	1,469	1,330	94	$27.5M
Material Handling Equipment	4,634	4,291	3,907	727	$98.6M

- **Medical and Dental**: The Army Reserve provides 59 percent of the Army's medical and dental capabilities. Army Reserve medical and dental units are equipped and modernized to 80 percent, with the exception of the combat support hospitals. One quarter of the combat support hospitals are fully equipped and modernized. Due to the rapid evolution of medical technology and costs associated with storage, maintenance, and procurement, it is more affordable to maintain current equipping levels for this capability. To ensure medical proficiency levels are maintained to support combat operations, HD, and DSCA missions, 30 Triage Training sets are required. The mitigating strategy to offset equipment modernization shortages includes utilizing the Medical Regional Training Sites to provide the equipment necessary to provide rapid response to HD and DSCA missions. Efforts to support disaster relief and humanitarian assistance within the combatant commands include establishing fly

away packages equipped to provide surgical, pharmaceutical, and other medical capabilities including a 44-bed capacity.

d. Transportation

The Army Tactical Wheeled Vehicle (TWV) 2025 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 quantity of armor-capable TWV required to meet the 50 percent armored and operational requirements. Critical investments in new procurement and recapitalization programs have been instrumental in modernizing the Army Reserve's TWV fleet. The following three fleets comprise the Army Reserve's TWVs: light, medium, and heavy.

- **Light Tactical Vehicle (LTV)**: The HMMWV recapitalization program ceased in FY 2010, and there is no Army program to modernize the fleet at this time. Including substitutes, the Army Reserve has 100 percent of its HMMWV requirement. However, only 19 percent of the fleet is armor-capable. The Army is in the process of redistributing armor-capable vehicles to the Army Reserve to replace legacy equipment and serve as a bridging strategy until the JLTV is developed and fielded. Army Reserve JLTV fielding is scheduled to begin in FY 2022. Ultimately, the JLTV will replace one-third of the HMMWV fleet. Currently, no program exists to recapitalize the residual HMMWV fleet, though many of these vehicles are projected to remain in the inventory through 2045. The remaining LTV fleet comprises un-armored and legacy vehicles which are limited to HD and DSCA operations that do not require armor-capable equipment. Of specific concern is the legacy ambulance fleet, which remains below 68 percent fill and surpasses its economic useful life.

- **Medium Tactical Vehicle (MTV)**: The MTV fleet is projected to be at 100 percent fill and 90 percent modernized by the end of FY 2016. Anticipated Army TWV 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 non-armor capable legacy systems that are not globally deployable. This is a concern as the bulk of the HTV assets reside within the Army Reserve. The HEMTT family is projected to be at 100 percent on-hand by FY 2016. The on-hand percentage will continue to increase through the reallocation of vehicles redeploying from theater. Resourcing vehicle recapitalization must continue to achieve the modernization requirements defined in the Army's Equipment Modernization Strategy. The HEMTT wrecker fleet, a critical asset for recovery operations, and the PLS fleet are projected to be at 60 percent modernized, and the HEMTT Light Equipment Transport is projected to be at 72 percent modernized, all by FY 2015.

e. Watercraft

The unique capabilities of Army Reserve watercraft provide support to combat operations and to HD and DSCA missions (see Table 2-15). Aging watercraft fleets continue to increase maintenance and operational costs. Motorized watercraft requires on-condition cyclic maintenance (OCCM) every three years and every four years for barges. Service cost ranges up to $10M per maintenance cycle, totaling $15M–$22M annually. Near term service life extension

programs (SLEPs) and OCCM execution continue to extend and enhance the Army Reserve's capabilities. The SLEPs and OCCM enable the Army Reserve to maintain an aging fleet while awaiting modernization or new equipment procurement.

- **Landing Craft Utility (LCU) 2000**: LCU was designed for 25 years of service. The average age of the current fleet is 24 years. Modernization efforts have been delayed due to reallocation of funding from FY 2016 to FY 2017 and FY 2019. Army Reserve LCU modernization will remain at 50 percent through FY 2022. On average, it takes 24 months to complete modernization of one LCU.

- **Large Tug 128 Foot:** The Army Reserve has a requirement for three Large Tugs with a projected shortage of one at the end of FY 2016. Due to fiscal constraints, the Army has decided to delay procurement until the operations tempo requires this capability.

- **Barge Derrick Crane 115 Ton**: The Army Reserve has a requirement for three Barge Derricks, of which two are on-hand (66 percent). The Army Reserve is mitigating the training impact by sharing equipment between the AC and RC.

- **Landing Craft Mechanized (LCM) 8**: The LCM 8 fleet was fielded in 1967 and is well beyond its life cycle. Extensive time required to complete dry docking repairs significantly increases cost required to maintain the fleet.

Table 2-15. Watercraft Systems

Equipment	FY 2017 Required	FY 2017 On-hand	FY 2017 Modern On-hand	FY 2017 Modern Shortage	Unresourced Requirement
LCU 2000	20	7	7	13	$455.0M
Large Tug 128 Foot	3	2	2	1	$12.5M
Barge Derrick 115 Ton	3	2	2	1	$24.0M

f. Engineering and Combat Mobility

Engineering and combat mobility consists mainly of bridging, countermine, horizontal construction, mine detection, and route clearance equipment. The Army Reserve retains 30 percent of the engineer capabilities for the total force to include 24 percent of the Army's Multi-role Bridge capability. The Vehicle Mounted Mine Detection System, known as "Husky," and the Mine Protected Clearance Vehicle, known as "Buffalo," are scheduled for delivery to the Army Reserve's route clearance units through FY 2017. Additionally, modernization of bulldozers and motorized graders are programmed. Equipment and modernization shortfalls exist in employing combat mobility capabilities necessary for safeguarding maneuver and movement of supported forces. Total resources required to completely fill engineering and combat mobility shortfalls exceed $300M (see Table 2-16).

Table 2-16. Construction and Engineering Equipment

Equipment	FY 2017 Required	FY 2017 On-hand	FY 2017 Modern On-hand	FY 2017 Modern Shortage	Unresourced Requirement
Construction	5,199	5,031	3,854	1,345	$23.5M
ACE/Dozer	993	764	622	371	$10.7M
Assault Bridging	216	146	92	124	$22.9M
Countermine	3,517	2,678	2,159	1,358	$267.3M

g. Force Protection

Force protection includes CBRN, obscurants, base defense, and collective and individual protection, of which the Army Reserve provides 43 percent of the capability for the Army. Of the 60 systems comprising force protection, the most significant is the Nuclear–Biological-Chemical Reconnaissance Vehicle (NBCRV), a Stryker-based platform incorporating multiple detection systems. The Army Reserve is projected to be 61 percent modernized in this system by FY 2017. The NBCRV is an essential CDU item, in support of the Army Reserve's increased HD/DSCA role and the Defense CBRN Response Force.

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

Equipment shortfalls continue to exist due to the realignment of CA and MISO from the United States Army Special Operations Command to the Army Reserve (see Table 2-17). HQDA continues to provide oversight of current and future equipping actions that will improve the readiness of CA and MISO unique equipment. Systems, including the special operations forces (SOF) Deployable Node-Lite and the Product Distribution System-Lite, are forecasted to be below 80 percent equipment on-hand through FY 2016.

Table 2-17. CA and MISO Systems

Equipment	FY 2017 Required	FY 2017 On-hand	FY 2017 Modern On-hand	FY 2017 Modern Shortage	Unresourced Requirement
SOF Deployable Node-Lite (SDN-L)	999	944	944	55	$1.9M
Product Distribution System-Lite (PDS-L)	709	644	644	65	$13.9M

D. Summary

The Army Reserve's goal is to ensure that units and Soldiers have the most modern equipment for supporting contingency operations, HD, and DSCA missions. Over the past decade, the Army Reserve equipping posture significantly improved as reflected by achieving 86 percent EOH and 66 percent modernization. Despite these improvements, critical equipping and modernization shortages remain one of the Army Reserve's greatest challenges. Declining budgets coupled with anticipated delays in production and modernization will significantly increase the sustainment costs associated with maintaining an aging fleet. Congressional support is essential in achieving the means necessary to address unfunded requirements in equipment and modernization

shortfalls. Investing in the Army Reserve today as an enduring operational force is a cost effective and affordable solution for expanding and preserving the Army Reserve's unique capabilities for enabling a strong national defense and protecting national interest at home and abroad.

Annex A
Explanation of Army Reserve Embedded Equipment Tables

Equipment	FY 2017 Required	FY 2017 On-hand	FY 2017 Modern On-hand	FY 2017 Modern Shortage	Unresourced Requirement
ATLAS II	1,042	1,042	905	137	$22.8M

Equipment—General nomenclature of the equipment item.

FY 2017 Required—Based on the forecasted requirement at the end of FY 2017.

FY 2017 On-hand—Based on the forecasted on-hand at the end of FY 2017.

FY 2017 Modern On-hand—Removes equipment considered not modern from the *FY 2017 On-hand* number. Modern equipment is defined as the most current equipment item that meets global mission requirements.

FY 2017 Modern Shortage—*FY 2017 Required* minus *FY 2017 Modern On-hand.*

Unresourced Requirement—Average estimated cost of the equipment multiplied by the *FY 2017 Modern Shortage.*

USAR

Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Aircraft							
Airplane Cargo Transport: C-12D	A29812	$1,967,301	4	4	4	4	0
Airplane Cargo Transport: C-12F *	A30062	$3,068,422	11	11	11	11	44
Airplane, Cargo Transport	BA108Q	$2,150,000	6	6	6	6	0
CH-47F Improved Cargo Helicopter *	C15172	$30,000,000	0	19	24	25	24
Helicopter Cargo Transport: CH-47D *	H30517	$5,000,000	42	42	42	42	0
Helicopter Utility: UH-60L *	H32361	$4,855,000	58	58	58	58	0
Helicopter Utility: UH-60M *	H32429	$8,000,000	0	0	0	0	27
Helicopter Attack: AH-64D	H48918	$25,128,800	48	48	48	48	48
Helicopter Utility: UH-60A *	K32293	$4,635,000	1	1	1	1	0
MEDEVAC Helicopter: HH-60M *	M33458	$7,800,000	24	24	24	30	42
Small Unmanned Aircraft System: Raven B	S83835	$100,000	59	83	84	84	82
Utility Cargo Aircraft: UC-35A *	U05004	$3,922,313	7	7	7	7	16
HH-60L: MEDEVAC Helicopter *	U84291	$7,908,000	5	5	5	5	0
Aviation							
Armament Subsystem Helicopter 7.62mm Machine Gun	A05004	$10,000	10	10	10	10	24
Air Traffic Control Central: AN/TSW-7A *	A27624	$819,882	0	0	0	0	1
Countermeasures Set: AN/ALQ-162(V)2	C20472	$223,300	0	0	0	0	10
Countermeasures Set: AN/ALQ-136(V)2	C31084	$175,000	0	0	0	0	10
Detecting Set Radar Signal: AN/APR-39(V)2	D03682	$24,632	0	0	0	0	10
External Stores Subsystem: UH-60A	E21985	$676,111	10	10	10	10	53
Hoist High Performance *	H39331	$142,338	7	7	7	7	45
Detecting Set, Laser AN/AVR-2B(V)1	L60482	$108,318	24	24	24	24	125
Launcher Guided Missile: Longbow Hellfire XM299	L67410	$72,157	145	145	145	145	192
Radar Set: AN/TPN-31 *	R17126	$3,701,502	0	0	0	0	1
Radar Warning System: AN/APR-44(V)1	R44571	$16,946	0	0	0	0	10
Radar Warning System: AN/APR-44(V)3	R44639	$17,028	0	0	0	0	10
Radio Set: High Frequency AN/ARC-220 (V)2	R81623	$23,358	9	9	9	9	72
Radio Set: High Frequency AN/VRC-100 (V)1	R81691	$33,707	19	21	21	21	28
Radio Set Personnel Locator: AN/ARS-6(V)2	R85011	$36,000	13	13	13	13	48
Shelter: Tactical Expandable One-sided	S01291	$178,001	47	49	50	50	111
Tool Set Aircraft Maintenance *	T59439	$3,600,000	0	0	0	0	3
Warning Receiver System, Countermeasure: AN/AAR-57(V)1	W41457	$220,800	4	4	4	4	42
Warning Receiver System, Countermeasure	W55180	$505,000	0	7	7	7	24
Warning Receiver System, Countermeasure	W62187	$452,000	0	0	0	0	15
Warning Receiver System, Countermeasure	W62437	$377,000	9	9	9	9	86
Warning Receiver System, Countermeasure	W62562	$365,000	0	0	0	0	24

USAR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Battle Command (Command & Control)							
BTUH 60000 Environmental Control Unit: HD-1240/G	B29108	$9,000	155	397	397	397	1,173
Computer System: Digital AN/UYQ-90(V)2 *	C18278	$16,676	2,322	2,322	2,322	2,338	4,970
Computer Set: Digital AN/UYK-128 *	C18378	$15,954	3,466	4,623	4,623	4,671	6,113
Computer Set: Digital OL-604/TYQ	C18684	$14,899	11	143	160	173	341
Communications Central: AN/ASC-15E	C59313	$617,900	0	0	0	0	18
Computer Set: Digital OL-603/TYQ	C78827	$14,899	13	52	62	62	124
Computer System: Digital AN/UYQ-90(V)3 *	C78851	$16,875	458	532	532	552	1,678
Generator Set: Diesel Engine Trailer PU-807A	G17528	$81,942	30	43	43	43	264
Generator Set: Diesel Engine MEP-810B	G17800	$449,397	0	0	0	0	4
Generator Set: DED Skid-mtd 3kW 60Hz *	G18358	$9,922	2,938	4,002	4,002	4,002	4,554
Generator Set: DED 15kW 50/60Hz Skid-Mtd	G49966	$20,949	0	55	166	301	375
LTT Trailer-Mtd: PU-2002 10kW 50/60Hz	L84622	$43,721	0	82	238	395	501
Navigation Set: Satellite Signals AN/GSN-13	N96180	$39,152	0	9	15	19	52
Power Supply: PP-6224/U *	P40750	$4,322	1,553	3,253	3,254	3,255	4,621
Panel Power Distr: 60Hz 400amp	P60558	$17,711	73	113	113	127	180
Print System-Light: MISO	P61915	$700,000	0	0	1	2	33
Rigid Wall Shelter: Command Post *	R98145	$162,800	2	2	2	2	12
Trailer-Mtd: PU-2101 15kW 50/60Hz M200A1	T40090	$44,157	0	58	164	318	488
Trailer-Mtd: PP-3106 60kW 50/60Hz 2M200A1	T93232	$58,622	0	3	4	4	10
Army Human Resources Workstation *	Z39781	n/d	1,089	1,089	1,089	1,089	2,771
Battlespace Awareness							
Detecting System Countermeasures: AN/MLQ-40(V)4	D04182	$1,400,000	4	4	8	12	16
Digital Topographic System: AN/TYQ-67(V) *	D10281	$2,500,000	4	8	8	8	9
Data Analysis Central: AN/MSW-24	D77801	$318,673	2	4	4	6	8
Distributed Common Ground System: AN/TSQ-256(V)2	Z01377	n/d	0	0	0	0	11
Battle Command Transport Networks							
Battalion Command Post Switching Group *	B67234	$225,000	141	144	144	144	146
Computer System Digital: AN/PYQ-1 (C) *	C05002	$2,919	20,304	21,847	22,240	22,793	30,360
Cryptographic Equipment: MTU TSEC/KY-100 AIRTERM *	C52700	$6,159	152	152	152	152	360
Communication Equipment: SOMS-B	C58976	$5,000,000	2	2	2	2	8
Installation Kit: MK-2324/ASC-15B	J31656	$119,982	0	0	0	0	18
Installation Kit: MK-2584/ASC-15B	J87768	$21,577	0	0	0	0	18
Key Processor TSEC/KOK-22A	K05001	$18,100	2	2	2	2	52
Multi-band Multi-mission Radio (MBMMR): AN/PSC-5D	M27420	$25,744	0	0	0	0	886
Receive Suite: AN/TSR-8 *	R30658	$148,583	5	5	5	7	28
Radio Set: AN/VRC-89F(C) *	R44999	$11,128	1,325	1,423	1,512	1,552	2,551
Remote Control Unit: KY-100 AIRTERM *	R71740	$4,861	124	124	124	124	328
Satellite Communication System: AN/TSC-156 *	S23268	$2,000,000	33	33	33	33	33
Terminal: Satellite Communication AN/TSC-154	T81733	$3,333,000	84	84	84	84	84
Radio Set: Hand-held Radio *	Z01320	n/d	22	501	557	579	4,977
Combat Mobility							
Bridge Armored Vehicle Launched Scissors: 63-ft *	B31098	$304,952	45	45	45	45	108

USAR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Detecting Set: Mine AN/PSS-14	D03932	$19,300	898	1,002	1,023	1,134	2,743
Instrument Set Reconnaissance / Survey: AN/TKQ-5	D17191	$61,488	147	221	276	312	371
Loader Skid Steer: Type II *	L77147	$31,390	29	32	32	32	199
Loader Skid Steer: Type III *	L77215	$26,395	89	114	131	148	353
Mine Resistant Vehicle	M74226	$850,000	0	18	18	18	264
Trailer Set Mine Detection	T05003	$460,000	8	13	13	13	72
Medium Flail	Z00699	n/d	0	0	0	0	24
Man Transportable Robotic System	Z01251	n/d	0	18	26	48	72
Field Logistics							
Assault Kitchen *	A94943	$42,000	0	22	40	61	156
Containerized Laundry	C28019	$161,835	16	21	21	21	30
Diagnostic Test Set *	D12196	$9,672	29	29	30	31	58
Dolly Set Lift Transportable Shelter: 7.5-ton *	D34883	$28,772	191	191	191	191	334
Fuel System Supply Point Type 4: 300K	F04966	$200,000	59	76	76	76	138
Conveyor Belt: Portable Driving Unit Electric	F06972	$8,352	53	58	58	58	328
Electronic Shop Shelter-mtd Avionics: AN/ASM-146 *	H01907	$165,575	65	112	128	135	232
Electronic Shop Shelter-mtd Avionics: AN/ASM-147 *	H01912	$127,819	28	29	29	29	38
Hydraulic System Test and Repair Unit	H05002	$80,000	37	60	60	61	185
Hoseline Outfit Fuel Handling: 4-in Diameter Hose	K54707	$343,437	37	51	51	51	76
Laundry Advanced System: Trailer-mtd *	L70538	$620,000	69	76	76	76	108
Mobile Integrated Remains Collection System	M57970	$360,000	70	78	78	78	120
Petroleum Quality Analysis System	P25743	$1,384,000	23	24	25	25	33
Pump Centrf: DED Skid-mtd 6in 800-gpm 1800 FT HD	P93102	$50,478	0	0	0	0	120
Rough Terrain Container Handler: Kalmar RT240 *	R16611	$740,815	248	271	271	271	334
Refueling System: Aviation HEMMT tanker *	R66273	$24,460	11	11	11	11	25
Shelter: Tactical Expandable Two-sided *	S01359	$223,219	66	74	76	78	125
Sanitation Center: Food *	S33399	$33,865	367	403	418	433	529
Shop Equipment Machine: Heavy less power	T15640	$84,759	5	5	5	5	14
Shop Equipment Machine: Heavy No 1 less power	T15641	$54,273	7	7	7	7	14
Load Handling System: 2000-gal Water Tank (HIPPO) *	T32629	$131,839	51	72	109	122	204
Tractor Wheeled: 4X4 w/Forklift and Crane	T33786	$93,202	73	73	73	73	170
Terminal Tactical Petroleum: Marine	T56041	$1,400,873	0	0	0	0	12
Truck Tractor Yard: 46000 GVW 4X2	T60353	$96,051	90	100	100	100	294
Tophandler: 20-ft Container MIL-T-52951 ME	T67595	$19,709	45	46	46	46	84
Tophandler: 40-ft Container MIL-T-52951 ME	T67731	$30,064	13	13	13	13	42
Truck Lift Fork: Variable Reach Rough Terrain *	T73347	$166,639	900	964	966	985	1,056
Test Set Radio Frequency Power: AN/USM-491	T89944	$1,941	31	32	32	32	100
Tank Fabric Collapsible	V14744	$1,809	6	6	6	6	144
Tank Fabric Collapsible: Water 3000-gal	V15018	$1,816	7	13	13	13	332
Tank Unit Liquid Dispensing Trailer Mounting *	V19950	$2,000	214	228	325	384	657
Water Purification: Reverse Osmosis 3000-gph Trailer-mtd *	W47225	$748,000	26	34	34	37	46
Water Storage/Distribution Set: 40000 GPD *	W55968	$121,746	0	3	6	8	28
Trailer Tank Water: 400-gal 1-1/2 ton *	W98825	$16,000	1,007	1,008	1,016	1,027	1,276

USAR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Voltmeter Digital: AN/GSM-64	Y14526	$3,155	22	28	28	28	68
Force Protection							
Alarm Chemical Agent: Remote Sensing XM21	A32638	$173,447	21	21	21	21	36
Chem-Bio Protective Shelter: M8 *	C07506	$622,051	1	1	1	1	2
Joint Chemical Agent Detector *	J00697	$4,101	8,189	8,208	8,219	8,219	8,376
Mask Chem-Bio Joint Service General Purpose: M50	M12986	$262	757	886	886	947	137,276
Mask Chem-Bio: Combat Crewman: M51	M13236	$430	19	19	19	19	3,850
NBC Reconnaissance Vehicle: (NBCRV) *	N96543	$4,394,803	12	49	49	54	96
Radiac Set: AN/PDR-75A *	R30925	$8,234	1,414	1,640	1,663	1,713	2,400
General Engineering							
Crane Wheel-mtd: Hydraulic 7.5-ton Airmobile/Airborne	C36219	$56,284	0	0	0	0	5
Distributor Water Tank: 6000-gal Semitrailer-mtd *	D28318	$30,289	55	55	55	55	85
Excavator: Hydraulic Type I Multipurpose Crawler *	E27792	$236,830	69	88	107	107	109
Compressor Unit: Trailer-mtd 250-cfm 100-psi	E72804	$18,507	264	264	264	264	374
Distributor Bituminous Material Tank: Truck-mtd 1500-gal	G27844	$86,259	1	1	1	1	4
Motorized Grader *	M05001	$209,951	42	55	69	74	141
M1158 Truck: HEMTT-based Water Tender *	M31997	$420,058	42	42	42	42	42
Mixer Concrete Trailer-mtd: Gas-driven 16 cu ft	M54151	$14,496	1	1	1	1	15
Mixer Concrete Module: PLS 2600-gal	M81382	$127,160	27	29	29	29	39
Roller Vibratory: Self-propelled High-impact	S12916	$45,183	0	1	1	1	6
Scraper: Self-propelled 8-11 cu yd *	S29971	$162,596	0	0	0	0	12
Tractor Full Tracked High-speed: Deuce *	T76541	$432,799	7	10	10	10	12
Truck: Tactical Firefighting 8X8 *	T82180	$640,131	68	68	68	68	70
Tractor Full Tracked: Diesel *	W76816	$205,000	232	232	242	258	277
Tractor Full Tracked: Diesel *	W83529	$245,275	148	148	148	148	150
Tractor Full Tracked: T-5	Z01016	n/d	0	0	0	0	11
Tractor Full Tracked: T-5 Type II w/Ripper	Z01433	n/d	0	0	0	0	11
Maneuver Systems							
Drivers Enhancers: AN/VAS-5 *	D41659	$35,000	55	706	706	706	782
Medical Field Systems							
Computer Set: Digital AN/TYQ-107(V)1 *	C18277	$6,452	330	482	577	677	911
Computer Set: Digital AN/TYQ-106(V)1 *	C18345	$5,252	465	757	962	1,077	1,963
Computer System: Digital AN/TYQ-108(V)2	C27571	$49,335	10	10	10	10	20
Computer System: Digital AN/TYQ-108(V)1	C41358	$39,000	4	13	19	19	36
Dental Materiel Set Oral : Maxillofacial Surgery	D65925	$565,836	0	0	0	1	2
Monitor Patient Vital Signs: (MVS)	M66626	$8,807	324	571	699	723	863
Soldier Systems							
Night Vision Goggle: PVS-7 *	N05482	$6,000	19,205	26,650	27,050	27,797	76,613
Sight Bore Optical: M150 *	S45729	$1,199	8,688	16,218	16,898	16,931	17,238
Medium Weapon Thermal Sight: AN/PAS-13(V)2 *	S90535	$17,591	7,627	10,486	10,533	10,680	10,745
Armament Subsystem: Remotely Operated	Z00751	n/d	0	0	0	0	96
Soldier Weapons							
Launcher Grenade: M320 *	L03621	$3,413	21	708	953	1,203	3,756

USAR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Launcher Grenade: M320A1 *	L69080	$3,413	398	2,155	2,155	2,155	3,343
Machine Gun: Light 5.56mm M249	M39263	$2,779	2,654	2,660	2,679	2,688	3,407
Pistol 9mm: M11 *	P47365	$695	689	689	689	689	1,355
Rifle 5.56mm: M4 *	R97234	$1,329	26,908	29,897	30,388	31,229	33,038
Strike							
Computer Set: AN/GYG-1(V)1	C17936	$65,700	2	2	2	2	5
Computer Set: AN/GYG-1(V)3	C18004	$155,600	1	2	2	2	5
Computer Set Field Artillery General: AN/GYK-47(V)5	F55607	$60,350	0	1	1	1	13
Support Systems							
Barge Deck Cargo: Harbors and Inland Waterways	B30786	$58,778	0	0	0	0	4
Barge Deck or Liquid Cargo: Nonprop *	B31197	$335,580	2	2	2	2	3
Platform: Container Roll-In/Roll-Out *	B83002	$16,633	7,966	10,454	10,454	10,724	14,469
Container Handling: HEMTT *	C84930	$39,150	0	0	0	0	4
Crane Barge: 89 to 250-ton *	F36090	$8,000,104	2	2	2	2	3
Landing Craft Mechanized: Mod2	L36654	$1,226,380	1	1	1	1	1
Landing Craft Mechanized: 69-ft	L36739	$162,612	10	10	10	10	8
Landing Craft Utility: RORO 245 to 300 ft *	L36989	$5,000,000	7	7	7	7	7
Radar Signal Simulator Set: SM-674A/UPM	R93247	$24,431	8	8	8	8	21
Truck Maintenance: Utility Const 36000GVW 6X4	T53858	$70,280	12	12	12	12	13
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
Vessel Logistic Support: 245 to 300 ft *	V00426	$26,748,852	3	3	3	3	3
Tractor Wheeled Warehouse: Gas/Diesel 4000-lb	W89557	$17,352	12	15	15	15	35
Truck Cargo: 1/2 - 1 ton 4X4 6000-10000 GVW	X39893	$27,242	0	0	0	0	14
Tug: 1200 to 1530 hp	X71046	$3,170,694	1	1	1	1	0
X-Ray Apparatus: Radiographic Industrial	X91036	$17,417	3	3	3	3	18
Trailers							
Semitrailer Tank: 5000-gal Bulk Self-Load/Unload *	S10059	$77,550	1,021	1,024	1,024	1,024	1,080
Semitrailer Flatbed: Breakbulk/Container 34-ton *	S70159	$43,252	1,621	1,621	1,621	1,621	1,949
Semitrailer Low Bed: 25-ton 4-wheel W/E *	S70517	$7,729	107	107	108	111	203
Semitrailer Low Bed: 40-ton 6-wheel W/E *	S70594	$51,900	655	655	655	676	781
Semitrailer Low Bed: 70-ton HET	S70859	$229,219	404	404	422	422	481
Semitrailer Tank: Petroleum 7500-gal Bulk Haul	S73119	$27,774	401	401	401	401	480
Trailer: Palletized Loading 8X20 *	T93761	$46,731	2,614	2,692	2,737	2,844	3,121
Trailer Cargo: MTV w/Dropsides M1095 *	T95555	$62,829	1,691	1,942	1,990	2,047	2,257
Trailer Cargo: High Mobility 1-1/4 ton *	T95924	$8,954	2,080	2,188	2,188	2,191	2,343
Trailer Flatbed: 5-ton General Purpose	T96883	$14,423	0	0	0	0	19
Trailer Cargo: 3/4-ton 2-wheel W/E	W95537	$4,474	7	7	7	7	65
Trailer Cargo: 1-1/2 ton 2-wheel W/E *	W95811	$10,245	0	0	0	0	32
Trucks							
Armored Security Vehicle: Wheeled *	A93374	$809,500	261	291	291	323	360
Truck Utility: Heavy-variant HMMWV 10000 GVW *	T07679	$72,953	10,303	10,564	10,564	10,567	71

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature[1]	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Truck Utility: Armor Ready M1151A1 *	T34704	$210,000	3,107	3,419	3,544	3,600	4,742
Truck Utility Expanded Capacity M1152A1 *	T37588	$164,416	1,551	1,603	1,678	1,678	3,657
Truck Ambulance: 4-Litter Armored HMMWV *	T38844	$113,998	229	229	229	229	378
Truck Cargo: Heavy PLS 15-16.5 ton 10X10 *	T40999	$360,139	1,062	1,062	1,062	1,062	1
Truck Cargo: MTV *	T41135	$182,089	69	69	71	71	5
Truck Van: Expansible MTV M1087A1 *	T41271	$218,378	84	95	95	95	289
Truck Cargo: 5-ton wo/Winch *	T41515	$200,000	2,057	2,093	2,105	2,106	3,571
Truck Cargo: 2 1/2-ton LMTV LAPES/AD	T42063	$119,166	1	8	8	8	9
Truck Palletized LHS: M1120A4 *	T55054	$321,057	628	871	883	883	1,143
Truck Utility Expanded Capacity M1165A1 *	T56383	$186,891	1,526	1,532	1,536	1,536	10,327
Truck Tank: wo/Winch	T58318	$384,130	146	195	223	223	316
Truck Tractor: Heavy Equipment Transporter (HET) *	T59048	$256,704	306	306	306	306	0
Truck Cargo: M985A4	T59380	$361,629	27	60	73	73	126
Truck Cargo: wo/Winch *	T59448	$200,000	1,499	1,508	1,541	1,549	3,808
Truck Cargo: LMTV *	T60081	$176,428	1,981	2,236	2,236	2,236	227
Truck Cargo: LMTV *	T60149	$149,600	394	394	394	394	26
Truck Tractor: Light Equipment Transporter (LET) *	T60946	$289,352	605	605	605	605	859
Truck Tractor: Line Haul C/S 50000 M915 *	T61103	$162,968	1,343	1,343	1,343	1,343	180
Truck Tractor: MTV *	T61239	$167,746	394	398	398	398	8
Truck Utility: Cargo/Troop Carrier HMMWV *	T61494	$44,722	2,447	2,447	2,447	2,447	735
Truck Utility: Cargo/Troop Carrier HMMWV *	T61562	$41,253	81	81	81	81	30
Truck Utility: HMMWV M1113 *	T61630	$79,167	411	411	411	411	28
Truck Cargo: MTV LWB *	T61704	$170,073	11	11	13	13	2
Truck Cargo: MTV *	T61908	$184,333	862	1,144	1,145	1,145	57
Truck Wrecker: 8X8 Heavy Expanded Mobility *	T63093	$503,382	202	247	247	247	20
Truck Wrecker: M984A4	T63161	$491,382	179	218	228	230	461
Truck Dump: MTV *	T64911	$209,309	31	31	33	43	13
Truck Dump: MTV *	T64979	$139,015	0	0	0	0	1
Truck Dump: 10-ton wo/Winch *	T65342	$200,000	342	442	464	469	648
Truck: Palletized Loading System (PLS)	T81874	$360,000	536	589	654	769	1,868
Truck Tank: Fuel Servicing 2500-gal 8X8 *	T87243	$384,130	98	100	100	100	4
Tractor Line Haul: M915A5	T88858	$162,968	986	986	986	986	2,280
Truck Tractor: wo/Winch *	T88983	$200,000	500	627	627	641	1,244
Truck Tractor: LET 6X6 66000 GVW *	T91656	$166,223	625	625	625	625	16
Truck Utility: Armored 1-1/4-ton HMMWV *	T92242	$84,297	1,091	1,091	1,091	1,091	10
Truck Utility: Armored 1-1/4-ton HMMWV *	T92310	$60,020	182	182	182	182	0
Truck Utility: Up-armored HMMWV *	T92446	$146,844	131	131	131	141	4
Truck Van: LMTV *	T93484	$230,363	75	75	75	75	2
Truck Wrecker: MTV *	T94709	$331,680	108	118	118	118	190
Truck Cargo: 8X8 HEMTT w/LHS *	T96496	$321,057	56	170	180	210	26

1. "*" indicates a Critical Dual Use (CDU) equipment item

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Airplane, Cargo, Transport, C-12 (R, U, & V Models)	A30062	14	
Airplane, Cargo, Transport, UC-35A	U05004	15	
Airplane, Cargo, Transport, UC-35B	A05015	11	
Helicopter, Attack AH-64D	H48918	13	
Helicopter, Cargo CH-47D	H30517	23	
Helicopter, Utility UH-60L	H32361	21	
Helicopter, Utility HH-60L	U84291	7	
Helicopter, Utility HH-60M	M33458	3	
Battle Command (Command and Control)			
Generator Set, Diesel Engine Trailer PU-807A	G17528	5	
Generator Set, DED Skid-mtd 3kW 60Hz	G18358	11	
Combat Mobility			
Detecting Set: Mine AN/PSS-14	D03932	12	
Field Logistics			
Rough Terrain Container Handler: Kalmar RT240	R16611	6	
Tractor Wheeled IND: DED 4x4 w/Forklift and Crane	T33786	24	
Truck, Forklift, Rough Terrain, M-10A	T49119	30	
Truck, Tractor: YD 46000 GVW 4x2	T60353	25	
Truck Lift: Fork Variable Reach Rough Terrain	T73347	7	
Water Purification: Reverse Osmosis 3000 GPH	W47225	29	
Trailer Tank: Water 400 gal 1.5-ton 2-Wheel	W98825	32	
General Engineering			
Distributor Water Tank: 6000 gal Semitrailer-mtd	D28318	29	
Excavator: Hydraulic Type I Mulitpurpose Crawler-mtd	E27792	20	
Compressor Unit: Trailer-mtd 250CFM 100PSI	E72804	27	
Distributor Bitumin Matrl Tank Type: Truck-mtd 1500 gal	G27844	38	
Mixer Concrete: Trailer-mtd Gas-drvn 16 cu ft	M54151	42	
Roller Vibratory: Self-propelled High-impact Single	S12916	34	
Tractor FT High-speed: Dep Light (DEUCE)	T76541	14	
Tractor FT Low-speed: DSL Medium DBP	W76816	33	
Tractor FT Low-speed, w/Buldoz w/Scarif Ripper	W83529	21	
Support Systems			
Barge Deck or Liquid Cargo: NONPROP	B31197	59	
Crane Barge: 89 to 250 ton	F36090	18	
Landing Craft Mechanized: 69 ft	L36739	14	
Landing Craft Utility: Roll-on Roll-off	L36989	42	

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Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Tug: Large Coastal and Inland Waterway Diesel	T68330	20	
Tug: Small 900 Class	T68398	14	
Vessel Logistics Support: 245 to 300 ft Length	V00426	26	
Tractor Wheeled Warehouse: Gas/Diesel 4000 lb	W89557	35	
Tug: 1200 to 1530 HP	X71046	59	
Trailers			
Semitrailer Tanker, 5000-gal Bulk Haul, M967	S10059	22	
Semitrailer, 34-ton Flatbed, M872	S70159	25	
Semitrailer, 25-ton 4-wheel	S70517	53	
Semitrailer, Low Bed: 40-ton 6-wheel	S70594	22	
Semitrailer Low Bed: 70-ton HET	S70859	17	
Semitrailer, Fuel Tank, M1062	S73119	22	
PLS Trailer, 16.5-ton, M1076	T93761	12	
Trailer Flatbed: 5-ton 4-wheel General Purpose	T96883	19	
Trailer Cargo: 3/4-ton 2-wheel	W95537	35	
Trailer Cargo: 1.5-ton 2-wheel	W95811	38	
Trucks			
HMMWV Shelter Carrier, Heavy, M1097	T07679	14	
Truck Utility: ECV Armament Carrier w/IAP Armor	T34704	6	
Truck Ambulance: 4-Litter Armd HMMWV	T38844	25	
Truck Cargo: Heavy PLS transporter 15-16.5 ton	T40999	11	
Truck Cargo: MTV W/W	T41135	16	
Truck Cargo: 2.5-ton 4x4 LMTV W/W LAPES	T42063	16	
Truck Tank: wo/Winch	T58318	7	
Truck Tractor: HET	T59048	18	
Truck Cargo: LMTV	T60081	12	
Truck Cargo: LMTV W/W	T60149	15	
Truck Tractor: LET	T60946	6	
Truck Tractor: Line Haul C/S 5000 GVWR M915	T61103	21	
Truck Tractor: MTV	T61239	14	
Truck Utility: Cargo/Troop Carrier HMMWV	T61494	21	
Truck Utility: Cargo/Troop Carrier HMMWV	T61562	22	
Truck Utility: ECV 4x4 M1113	T61630	13	
Truck Cargo: MTV 5-ton	T61704	6	
Truck Cargo: MTV	T61908	10	
Truck Wrecker: Tactical 8x8 Heavy Expanded	T63093	15	
Truck Dump: MTV	T64911	17	
Truck Tank: Fuel Servicing 2500 gal	T87243	18	
Truck Tractor: LET 6x6 66000 GVW W/W C/S	T91656	19	

USAR

Table 2

Average Age of Equipment

Nomenclature	Equip No.	Average Age	Remarks
Truck Utility	T92242	18	
Truck Utility: Armt Carrier Armd HMMWV	T92310	24	
Truck Utility: ECV Up-armored HMMWV	T92446	10	
Truck Van: LMTV	T93484	11	
Truck Wrecker: MTV W/W	T94709	18	
Truck Cargo: Tactical 8x8 Heavy Expanded LHS	T96496	14	

USAR

Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017
Aircraft			
UH-60 Blackhawk M Model (MYP)	$111,180,000		
CH-47 Helicopter	198,000,000		
Modification of Aircraft			
Utility/Cargo Airplane Modifications	5,434,000	$6,221,000	$2,102,000
Network and Mission Plan	1,230,000	1,129,000	1,687,000
Comms, Nav Surveillance		6,386,000	5,841,000
Global Air Traffic Management (GATM) Rollup		2,447,000	5,775,000
Support Equipment and Facilities			
Common Ground Equipment	1,269,000	2,581,000	2,743,000
Air Traffic Control	1,082,000		
Modification of Missiles			
Improved Target Acquisition System (ITAS) / TOW Modifications		514,000	
Weapons and Tracked Combat Vehicles (WTCV)			
Joint Assault Bridge			21,231,000
XM320 Grenade Launcher Module (GLM)	1,630,000	7,000,000	1,397,000
Carbine		3,595,000	4,020,000
Handgun			1,593,000
M2 .50 cal Machine Gun Modifications	6,830,000	11,979,000	17,670,000
Tactical and Support Vehicles			
Tactical Trailers/Dolly Sets	2,376,000	3,360,000	3,315,000
Truck, Dump, 20-ton (CCE)		3,036,000	4,978,000
Family of Heavy Tactical Vehicles (FHTV)	3,341,000	9,935,000	6,498,000
Palletized Load System (PLS) Extended Service Program (ESP)	30,349,000	36,874,000	
Modification of In-service Equipment	7,778,000	40,477,000	18,524,000
Communications and Electronics Equipment			
Warfighter Information Network-Tactical (WIN-T) - Ground Forces Tactical Network	21,234,000	3,180,000	2,044,000
Transportable Tactical Command Communications			3,045,000
SHF Term	1,419,000	.	
SMART-T (Space)		250,000	
Global Broadcast Service (GBS)	1,170,000		
Army Materiel Command (AMC) Critical Items - OPA-2	3,607,000	4,879,000	4,623,000
Family of Medical Communications for Combat Casualty Care	10,051,000	10,215,000	6,128,000
Army Civil Affairs (CA)/Military Information Support Operations (MISO) GPF Equipment	2,878,000	10,002,000	16,417,000
Communications Security (COMSEC)	3,082,000	2,234,000	2,528,000
Distributed Common Ground System - Army (DCGS-A) (MIP)	2,159,000	4,655,000	4,665,000
Counterintelligence (CI) and Human Intelligence (HUMINT) Automated Reporting and Collection System (CHARCS) (MIP)	67,000	69,000	71,000
Night Vision Devices	22,935,000	984,000	1,000,000

USAR

Table 3

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2015	FY 2016	FY 2017
Joint Battle Command - Platform (JBC-P)	10,768,000	10,733,000	11,756,000
Air & Missile Defense Planning and Control System (AMDPCS)	5,443,000	9,032,000	
Network Management Initialization and Service	2,823,000	1,348,000	1,290,000
Maneuver Control System (MCS)	9,244,000	23,954,000	44,656,000
Global Combat Support System - Army (GCSS-A)	35,812,000	39,147,000	37,157,000
Reconnaissance and Surveying Instrument Set	3,380,000	5,548,000	5,060,000
Items less than $5M (Surveying Equipment)	1,032,000	896,000	417,000
Other Support Equipment			
CBRN Defense		8,852,000	3,794,000
Tactical Bridge - Float Ribbon		4,956,000	19,608,000
Ground Standoff Minefield Detection System (GSTAMIDS)	6,406,000	11,133,000	8,472,000
Husky Mounted Detection System (HMDS)	3,338,000	4,638,000	6,571,000
Robotic Combat Support System (RCSS)		2,719,000	1,571,000
Remote Demolition Systems	1,710,000	1,560,000	
Items Less Than $5M (Countermine Equipment)		1,941,000	757,000
Heaters and Environmental Control Units (ECUs)	922,000	3,044,000	5,475,000
Field Feeding Equipment	660,000	1,650,000	1,254,000
Cargo Aerial Delivery & Personnel Parachute System	132,000	132,000	132,000
Family of Engineer Combat and Construction Sets	7,984,000	6,953,000	5,942,000
Quality Surveillance Equipment	1,435,000	1,343,000	
Distribution Systems, Petroleum & Water	3,070,000	1,614,000	
Combat Support Medical	11,569,000	1,779,000	13,480,000
Mobile Maintenance Equipment Systems	2,217,000	2,224,000	2,224,000
Items Less Than $5M (Maintenance Equipment)	33,000	28,000	28,000
Scrapers, Earthmoving	3,298,000		
Compactor	1,615,000		
Hydraulic Excavator	4,938,000		
Tractor, Full Tracked	2,130,000	12,156,000	
All Terrain Cranes		5,035,000	2,048,000
Plant, Asphalt Mixing		992,000	
Enhanced Rapid Airfield Construction Capability	2,098,000	7,586,000	5,507,000
Construction Equipment ESP	3,156,000	2,245,000	5,329,000
Items Less Than $5M (Construction Equipment)	2,344,000	1,742,000	4,059,000
Army Watercraft ESP		10,025,000	10,025,000
Generators and Associated Equipment	2,503,000	2,921,000	35,215,000
Family of Forklifts	4,064,000	4,344,000	3,520,000
Training Devices, Nonsystem	5,085,000	9,526,000	13,760,000
Aviation Combined Arms Tactical Trainer	2,511,000	5,219,000	5,000,000
Gaming Technology in Support of Army Training	1,514,000	2,482,000	3,726,000
Integrated Family of Test Equipment (IFTE)	2,712,000	2,941,000	1,635,000
Test Equipment Modernization (TEMOD)	1,606,000	1,625,000	1,527,000
Modification of In-service Equipment (OPA-3)	2,733,000	1,666,000	3,143,000
Army Materiel Command (AMC) Critical Items - OPA-3	1,843,000	7,430,000	6,250,000
Total	**$591,229,000**	**$395,161,000**	**$408,283,000**

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014[1]
FY 2012 NGREA Equipment			
Field Logistics	$75,000,000		
General Engineering	52,000,000		
Force Protection	5,000,000		
Heavy Tactical Vehicles	5,000,000		
Simulators	5,000,000		
Medium Tactical Vehicles	3,000,000		
FY 2013 NGREA Equipment			
Command and Control Equipment			
Tactical Network Systems		4,309,973	
Logistics Automation Systems		$652,000	
Construction and Engineering Equipment			
Heavy Scraper		5,803,340	
Field Logistics Systems			
Rough Terrain Cargo Handler		15,480,000	
Generators		14,627,040	
Field Kitchen		2,709,200	
Transportation			
Transportation Costs		2,001,800	
Aviation			
External Stores Subsystem		20,283,330	
Warning Receiver Counter Terrorism		7,665,000	
Aviation Ground Support System		544,698	
Armament Subsystem		320,000	
Medical Systems			
Mobile Medicine Equipment Set		3,600,000	
Simulators			
Engagement Skills Training (EST)		9,690,000	
Homestation Institutional Training System (HITS)		8,500,000	
Containerized Ranges		3,000,000	
Watercraft Bridge Simulator		1,500,000	
Construction Simulator		8,000	
Tactical Wheeled Vehicles			
Truck PLS (M1075A1)		98,787,128	
Truck Wrecker (M984A4)		29,169,865	
Truck Medium Tactical Vehicle (MTV)		1,099,744	
Truck HEMTT (M1120A4)		853,173	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2012	FY 2013	FY 2014[1]
Engineering Change Proposal (ECP)		255,709	
Watercraft			
Command and Control Equipment		9,000,000	
Shore Support Equipment		140,000	
Total	**$145,000,000**	**$240,000,000**	

1. Service FY 2014 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2014 will be provided in next year's NGRER.

USAR
Projected Equipment Transfer/Withdrawal Quantities

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

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Aircraft					
CH-47F Improved Cargo Helicopter	C15172		+18		
Small Unmanned Aircraft System: Raven B	S83835		+1		
Aviation					
Radio Set: High Frequency AN/VRC-100 (V)1	R81691		+2		
Warning Receiver System Counterm	W55180		+7		
Battle Command (Command & Control)					
BTUH 60000 Enviromental Control Unit: HD-1240/G	B29108		+242		
Computer System: Digital AN/UYQ-90(V)2	C18278				
Computer Set, Digital: AN/UYK-128	C18378		+1,123		
Computer Set: Digital OI-604/TYQ	C18684		+132	+17	
Com ULLS-AE W/Ptr	C40745		+12		
Computer Set: Digital OI-603/TYQ	C78827		+39	+10	
Computer System: Digital AN/UYQ-90(V)3	C78851		+74		
Generator Set: Diesel Engine Trailer PU-807A	G17528		+13		
Generator Set: DED Skid Mtd 3kW 60Hz	G18358		+1,284		
Generator Set: DED 15kW 50/60Hz: Skid-mtd	G49966			+9	
LTT Trailer-mtd: PU-2002 10kW 50/60Hz	L84622		+5		
Navigation Set: Satellite Signals AN/GSN-13	N96180				
Power Supply: PP-6224/U	P40750				
Panel Power Distr: 60Hz 400-amp	P60558		+40		
Trailer-mtd: PU-2101 15kW 50/60Hz M200A1	T40090		+24		
Trailer-mtd: PP-3106 60kW 50/60Hz 2M200A1	T93232		+1		
Army Human Resources Workstation (AHRW)	Z39781		+28		
Battlespace Awareness					
Digital Topographic System: AN/TYQ-67(V)	D10281		+4		
Detecting System Countermeasures: AN/MLQ-40(V)4	D04182			+4	
Data Analysis Central: AN/MSW-24	D77801		+2		
Distributed Common Ground System: Army Portable MFWS AN/TSQ-256(V)2	Z01377		+7		
Battle Command Transport Networks					
Battalion Command Post Switching Group	B67234		+3		
Computer System Digital: AN/PYQ-10(C)	C05002		+73	+136	
Cryptographic Speech Equipment: MTU TSEC/KY 100 Airterm	C52700			+81	
Receive Suite: AN/TSR-8	R30658				
Radio Set: AN/VRC-89F(C)	R44999		+98	+124	
Radio Set: AN/VRC-92F(C)	R45543		+649	+16	

USAR
Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Radio Set	R55336		+65	+73	
Radio Set: AN/PSC-5	R57606		+132	+42	
Radio Set: AN/VRC-88F(C)	R67330		+11		
Radio Set: AN/VRC-90F(C)	R68044		+2,579	+724	
Radio Set: AN/VRC-91F(C)	R68146		+124	+41	
Radio Set: AN/PRC-119F(C)	R83141		+1		
Satellite Communication System: AN/TSC-156	S23268		+1		
Satellite Communication Terminal: AN/TSC-154	T81733		+2	+1	
Radio Set: Hand-held Radio	Z01320		+1,741		
Combat Mobility					
Detecting Set: Mine AN/PSS-14	D03932		+112	+21	
Loader Skid Steer: Type III	L77215		+15	+17	
Mine Resistant Vehicle	M74226		+12		
Trailer Set Mine De	T05003		+5		
Field Logistics					
Containerized Batch Laundry	C28019		+5		
Diagnostic Test Set	D12196			+1	
Fuel System Supply Point: FSSP Type 4 300K	F04966		+2		
Conveyor Belt: Portable Driving Unit Elec	F06972		+5		
Electronic Shop Shelter-mtd Avionics: AN/ASM-146	H01907		+59	+8	
Electronic Shop Shelter-mtd Avionics: AN/ASM-147	H01912		+1		
Hydraulic System Test and Repair Unit (MX3)	H05002		+23		
Hoseline Outfit Fuel Handling: 4-in Diameter Hose	K54707		+14		
Laundry Advanced System (LADS): Trailer-mtd	L70538		+7		
Mobile Integrated Remains: Collection System	M57970		+8		
Rough Terrain Container Handler (RTCH): Kalmar RT240	R16611		+28		
Food Sanitation Center	S33399		+36	+9	
Load Handling System (LHS) Compatible, 2000-gal Water Tank Rack (HIPPO)	T32629		+8		
Truck Tractor: Yard 46000 GVW 4X2	T60353		+10		
Tophandler Attachment: 20-ft IC Freight Container MIL-T-52951 ME	T67595		+1		
Truck Lift: Fork Variable Reach Rough Terrain	T73347		+64	+2	
Test Set Radio Frequency Power: AN/USM-491	T89944		+1		
Tank Fabric Collapsible: Water 3000-gal	V15018		+6		
Tank Unit Liquid Dispensing Trailer Mounting	V19950		+2		
Water Purification: Reverse Osmosis 3000-gph Trailer-mtd	W47225		+8		
Trailer Tank: Water 400-gal 1.5-ton 2-wheel W/E	W98825		+1	+8	
Voltmeter Digital: AN/GSM-64	Y14526		+6		
Force Protection					
Joint Chemical Agent: Detector	J00697		+19	+11	
Mask Chemical-Biological Joint Service General Purpose: Field M50	M12986		+129		

USAR
Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
NBC Reconnaissance Vehicle (NBCRV)	N96543		+31		
Radiac Set: AN/PDR-75A	R30925		+226	+23	
General Engineering					
Comp Unit Rty: Air Trailer-mtd DED 250-cfm 100-psi	E72804		+2		
Motorized Grader	M05001			+9	
Mixer Concrete Module: PLS 2600-gal	M81382		+2		
Roller Vibratory: Self-propelled High-impact Single Drum	S12916		+3	+2	
Scraper Elevating: Self-propelled 8-11 cu yd Non-Sectionalized	S29971		+1		
Tractor FT High-speed: Deployable Lt Engineer (DEUCE)	T76541		+3		
Tractor FT Low-speed: DSL Med Dbp w/Buldoz w/Scarif Winch	W76816			+10	
Tractor FT Low-speed: T-5 Type II w/Ripper	Z01433		+4		
Maneuver Systems					
Drivers Enhancers: AN/VAS-5	D41659		+651		
Medical Field Systems					
Computer Set: Digital AN/TYQ-107(V)1	C18277		+53		
Computer Set: Digital AN/TYQ-106(V)1	C18345		+222	+2	
Computer System: Digital AN/TYQ-108(V)1	C41358		+9		
Monitor Patient Vital Signs	M66626		+229		
Soldier Systems					
Night Vision Goggle	N05482		+7,445	+400	
Sight Bore Optical: M150	S45729		+6,675	+680	
Medium Weapon Thermal Sight: AN/PAS-13(V)2	S90535		+2,886	+47	
Soldier Weapons					
Machine Gun: Light 5.56mm M249	M39263		+47	+19	
Launcher Grenade: M320A1	L69080		+1,757		
Pistol 9mm: M11	P47365		+20		
Strike					
Computer Set: AN/GYG-1(V)3	C18004		+1		
Computer Set Field Artillery General: AN/GYK-47(V)5	F55607		+1		
Support Systems					
Platform: Container Roll-in/Roll-out	B83002		+2,801		
Tractor Wheeled Warehouse: Gas/Diesel 4000-lb.	W89557		+3		
Trailers					
Semitrailer Tank: 5000-gal Bulk Haul Self-Load/Unload W/E	S10059		+3	+2	
Semitrailer Low Bed: 25-ton 4-wheel W/E	S70517			+1	
Semitrailer Low Bed: 40-ton 6-wheel W/E	S70594				
Semitrailer Low Bed: 70-ton Heavy Equipment Transporter (HET)	S70859			+18	
Semitrailer Tank: Petroleum 7500-gal Bulk Haul	S73119		+33	+19	
Trailer: Palletized Loading 8X20	T93761		+59		
Trailer Cargo: MTV W/Dropsides M1095	T95555		+135	+48	
Trailer Cargo: High Mobility 1-1/4 ton	T95924		+108		

USAR
Projected Equipment Transfer/Withdrawal Quantities

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Trailer Flatbed: 5-ton 4-wheel General Purpose	T96883				
Trailer Cargo: 1.5-ton 2-wheel W/E	W95811		+4		
Trucks					
Armored Security Vehicle: Wheeled w/Mount	A93374		+30		
Truck Utility: ECV Armament Carrier w/IAP Armor-ready M1151A1	T34704		+168	+125	
Truck Utility Expanded Capacity Enhanced: M1152A1	T37588		+52	+75	
Truck Cargo: MTV W/E W/W	T41135			+2	
Truck Van: Expansible MTV W/E M1087A1	T41271		+13		
Truck Cargo: 5-ton WO/Winch	T41515		+274	+1	
Truck Cargo: 2.5-ton 4X4 LMTV W/E W/W LAPES/AD	T42063		+8		
Truck Palletized (LHS): M1120A4	T55054		+317	+17	
Truck Utility Expanded Capacity Enhanced 4X4: M1165A1	T56383		+159	+4	
Truck Tank: WO/Winch	T58318		+17	+3	
Truck Cargo: M985A4	T59380		+20		
Truck Cargo: WO/Winch	T59448		+251	+33	
Truck Cargo: 4X4 LMTV W/E	T60081		+13		
Truck Utility: Cargo/Troop Carrier 1-1/4 ton 4X4 W/E (HMMWV)	T61494		+108		
Truck Cargo: MTV LWB W/E	T61704			+2	
Truck Cargo: MTV W/E	T61908		+8		
Truck Wrecker: Tactical 8X8 Heavy Expanded Mobility W/W	T63093		+1		
Truck Wrecker: M984A4	T63161		+72		
Truck Dump: MTV W/E	T64911			+2	
Truck Dump: MTV W/E W/W	T64979				
Truck Dump: 10-ton WO/Winch	T65342			+22	
Truck: Palletized Loading	T81874		+23		
Truck Tractor: WO/Winch	T88983		+4		
Truck Wrecker: MTV W/E W/W	T94709		+10		
Truck Cargo: Tactical 8X8 Heavy Expanded Mobility w/LHS	T96496			+1	

USAR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2011 Planned Transfers & Withdrawals							
USAR indicated no planned transfers or withdrawals in the FY 2011 NGRER.							
FY 2011 P-1R Equipment							
Modification of Aircraft							
Utility/Cargo Airplane modifications				$5,078,000	$7,000,000		
Utility Helicopter modifications				12,000,000	6,050,000		
Global Air Traffic Management (GATM) Rollup				2,220,000	700,000		
Modification of Tracked Combat Vehicles							
Joint Assault Bridge modifications				6,434,000	0		
Weapons & Other Combat Vehicles							
Machine Gun, M240 Medium (7.62mm)				10,488,000	0		
Machine Gun, .50 cal M2 Roll				8,123,000	8,100,000		
MK-19 Grenade Machine Gun (40mm)				2,022,000	2,022,000		
XM320 Grenade Launcher Module (GLM)				343,000	300,000		
M4 Carbine				3,207,000	3,200,000		
Shotgun, Modular Accessory System (MASS)				96,000	55,000		
M4 Carbine modifications				111,000	0		
M16 Rifle modifications				294,000	0		
Tactical Vehicles							
Tactical Trailers/Dolly Sets				4,908,000	0		
Semitrailers, Flatbed				10,854,000	0		
Family of Medium Tactical Vehicles (FMTV)				208,426,000	208,426,000		
Family of Heavy Tactical Vehicles (FHTV)				208,277,000	188,600,000		
Palletized Load System (PLS) Extended Svc Program (ESP)				10,127,000	5,700,000		
Armored Security Vehicles (ASV)				18,585,000	5,600,000		
Mine Protection Vehicle Family				57,751,000	57,751,000		
Truck, Tractor, Line Haul, M915/M916				24,210,000	22,900,000		
Heavy Expanded Mobile Tactical Truck (HEMTT) ESP				23,458,000	23,458,000		
HMMWV Recapitalization Program				465,646,000	0		
Joint Communications							
WIN-T Ground Forces Tactical Network				24,000,000	24,000,000		
Satellite Communications							
NAVSTAR Global Positioning System (Space)				16,550,000	0		

USAR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T) (Space)				92,000	0		
Global Broadcast Service (GBS)				803,000	0		
Mod of In-service Equipment (Tactical Satellite)				50,000	0		
Combat Communications							
Army Materiel Command (AMC) Critical Items (OPA2)				1,973,000	1,973,000		
Communications-Electronics Equipment Fielding				1,452,000	1,452,000		
SPIDER Anti-personnel Landmine Alternative (APLA) Remote Control Unit				561,000	300,000		
Medical Communications for Combat Casualty Care (MC4)				11,686,000	11,600,000		
Communications Information Security							
Telecommunications Security (TSEC) - Army Key Management System (AKMS)				2,390,000	2,390,000		
Information Systems Security Program (ISSP)				1,408,000	0		
Electrical Equipment - Tactical Intelligence							
Distributed Common Ground System - Army (DCGS-A) (MIP)				537,000	0		
Counterintel (CI) and Human Intel (HUMINT) Automated Reporting and Collection System (CHARCS) (MIP)				1,174,000	1,174,000		
Electrical Equipment - Tactical Surveillance							
Night Vision Devices				10,020,000	10,020,000		
Night Vision, Thermal Weapon Sight				706,000	706,000		
Force XXI Battle Command Brigade & Below (FBCB2)				2,550,000	0		
Electrical Equipment - Tactical Command & Control (C2) Systems							
Tactical Operations Centers				3,728,000	3,728,000		
Battle Command Sustainment Support System (BCS3)				5,823,000	5,823,000		
Air & Missile Defense Planning & Control System (AMDPCS)				2,314,000	4,062,000		
Transportation Coordinators-Automated Information for Movement System II (TC-AIMS II)				2,155,000	2,155,000		
Maneuver Control System (MCS)				410,000	19,300,000		
Single Army Logistics Enterprise (SALE)				6,159,000	6,159,000		
Reconnaissance and Surveying Instrument Set				4,291,000	4,291,000		
Electrical Equipment - Automation							
Combat Service Support (CSS) Communications				6,371,000	6,200,000		
Electrical Equipment - Audio Visual Systems							
Items Less Than $5M (Surveying Equipment)				954,000	954,000		
Chemical Defensive Equipment							
Family of Non-lethal Equipment (FNLE)				1,873,000	1,873,000		
CBRN Soldier Protection				92,734,000	34,100,000		
Bridging Equipment							
Tactical Bridging				29,317,000	4,200,000		
Tactical Bridge, Float-Ribbon				40,308,000	2,918,000		

USAR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Engineer (Non-Construction) Equipment							
Handheld Standoff Mine Detection System (HSTAMIDS)				17,532,000	17,434,000		
Ground Standoff Minefield Detection System (GSTAMIDS)				8,421,000	8,371,000		
Combat Service Support Equipment							
Heaters and Environmental Control Units (ECUs)				3,219,000	3,219,000		
Field Feeding Equipment				9,164,000	9,600,000		
Cargo Aerial Delivery & Personnel Parachute System				4,277,000	4,300,000		
Mobile Integrated Remains Collection System				19,087,000	26,400,000		
Items Less Than $5M (Engineer Support)				3,156,000	3,156,000		
Petroleum & Water Equipment							
Distribution Systems, Petroleum & Water				47,429,000	44,600,000		
Water Purification Systems				1,283,000	0		
Medical Equipment							
Combat Support Medical				13,085,000	12,914,000		
Maintenance Equipment							
Mobile Maintenance Equipment Systems				34,274,000	29,300,000		
Construction Equipment							
Skid Steer Loader (SSL) Family of Systems (FOS)				6,676,000	6,600,000		
Mission Modules - Engineering				10,830,000	5,900,000		
Hydraulic Excavator				5,919,000	5,919,000		
Tractor, Full Tracked				4,224,000	4,224,000		
High Mobility Engineer Excavator (HMEE) FOS				1,112,000	1,112,000		
Construction Equipment ESP				4,761,000	4,699,000		
Items Less Than $5M (Construction Equipment)				2,369,000	1,988,000		
Rail Float Containerization Equipment							
Harbormaster Command and Control Center (HCCC)				9,112,000	9,112,000		
Generators							
Generators and Associated Equipment				37,379,000	37,379,000		
Material Handling Equipment							
Rough Terrain Container Handler (RTCH)				21,208,000	21,208,000		
All Terrain Lifting Army System (ATLAS)				16,685,000	16,587,000		
Test, Measurement, and Diagnostic Equipment (TMDE)							
Integrated Family of Test Equipment (IFTE)				7,160,000	7,160,000		
Test Equipment Modernization (TEMOD)				724,000	724,000		
Modification of Other Support Equipment							
Modification of In-service Equipment (OPA3)				27,622,000	34,000,000		
FY 2011 NGREA Equipment[1]							
Simulators, Collective and Individual						$35,550,000	$18,708,774
Command Post Systems						22,100,000	21,510,001

USAR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Engineer Equipment						19,151,022	35,318,347
Material Handling Equipment (MHE)						17,099,600	16,989,820
Heavy Tactical Vehicles						15,350,000	15,135,069
Medium Tactical Vehicles						15,077,950	14,890,774
Civil Affairs & Military Information Support Operations (MISO) equipment						7,786,123	7,229,759
Test and Diagnostic Equipment						4,287,280	4,287,280
Power Generation and Distribution Systems						1,977,351	1,959,780
Medium Tactical Vehicles Trailers						1,619,200	1,543,922
Total				**$1,671,755,000**	**$1,005,146,000**	**$139,998,526**	**$137,573,526**
1. A decrement of $2,425,000 was applied to USAR FY 2011 NGREA due to FY 2013 sequestration reduction allocation.							

USAR

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 deployable in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired equipment item.

Required Item Nomenclature[1]	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes	No
Aircraft						
Airplane Cargo-Transport: C-12F *	A30062	Airplane Cargo Transport: C-12D	A29812	4	X	
Airplane Cargo-Transport: C-12F *	A30062	Airplane, Cargo Transport	BA108Q	6	X	
Airplane Cargo-Transport: C-12F *	A30062	Airplane, Utility	BA1000	12	X	
MEDEVAC Helicopter: HH-60L *	U84291	Helicopter Utility: UH-60L	H32361	4	X	
Aviation						
Detecting Set, Laser AN/AVR-2B(V)1	L60482	Laser Detecting Set: AN/AVR-2A(V)1	L60414	24	X	
Battle Command (Command & Control)						
Gen Set: DED TM PU-807A	G17528	Gen Set: 100kW 60Hz mtd on M353 PU-495	J35801	68	X	
Gen Set: DED 3kW 60Hz Skid-mtd *	G18358	Gen Set: 5kW 60Hz mtd on M116A2	G42238	21	X	
Gen Set: DED 3kW 60Hz Skid-mtd *	G18358	Gen Set: DED 60Hz AC MEP-531A	G36237	138	X	
Gen Set: DED 3kW 60Hz Skid-mtd *	G18358	Gen Set: DED 5kW 60Hz Skid-mtd	G11966	121	X	
Power Supply: PP-6224/U *	P40750	Power Supply: PP-2953/U	P38588	161	X	
Battle Command Transport Networks						
Crypto Equipment: MTU TSEC/KY-100 *	C52700	Speech Security Equip 28V RED: TSEC/KY-58	S01441	5	X	
Combat Mobility						
Mine Detecting Set: AN/PSS-14	D03932	MINE Detecting Set: AN/PSS-11	G02341	651	X	
Field Logistics						
Elec Shelter Mtd Avionics: AN/ASM-146 *	H01907	Electronic Shop Trailer-mtd: AN/ASM-189	H01855	34	X	
Elec Shelter Mtd Avionics: AN/ASM-147 *	H01912	Electronic Shop Trailer-mtd: AN/ASM-190	H01857	6	X	
Truck Lift Fork: Variable Reach RT *	T73347	Truck Lift Fork: 6K-lb Variable Reach RT	T48944	3	X	
Truck Lift Fork: Variable Reach RT *	T73347	Truck Lift Fork: 10K-lb Cap 48-in RT	T49119	13	X	
Force Protection						
Mask Chem-Bio Joint Service: M50	M12986	Mask Chemical Biological: M40	M12418	8,294	X	
Mask Chem-Bio Joint Service General Purpose: M51	M13236	Mask Chemical Biological: M42	M18526	24	X	
General Engineering						
Scraper Elevating: 8-11 cu yd *	S29971	Scraper Elevating: 9-11 cu yd	S30039	9	X	
Tractor Full Tracked: w/Buldoz - Scarif Winch *	W76816	Tractor Full Tracked Low-speed: T9	T05015	6	X	
Soldier Systems						
Night Vision Goggle, PVS-7 *	N05482	Monocular Night Vision Dev: AN/PVS-14	M79678	49,426	X	
Medium Weapon Thermal Sight: AN/PAS-13(V)2 *	S90535	Night Vision Sight CSW: AN/TVS-5	N04596	24	X	
Soldier Weapons						
Machine Gun 5.56mm: Light M249	M39263	Machine Gun 5.56mm: M249	M09009	814	X	
Rifle 5 56mm: M4 *	R97234	Rifle 5.56mm: M16A2	R95035	1,709	X	
Rifle 5 56mm: M4 *	R97234	Rifle 5.56mm: M16A4	R97175	338	X	

USAR

Table 7

Major Item of Equipment Substitution List

Required Item Nomenclature[1]	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes	No
Support Systems						
Platform: Container Roll-In/Roll-Out *	B83002	Flatrack: Palletized Loading	F12581	588	X	
Container Handling: HEMTT *	C84930	Container Handling	C27294	8	X	
Trailers						
Semitrailer Tank: 5000G Bulk Haul *	S10059	Semitrailer Tank: 5000G Fuel Dispensing	S73372	54	X	
Trailer Cargo: High Mobility 1-1/4 ton *	T95924	Light Tactical Trailer: 3/4 ton	T95992	291	X	
Trailer Cargo: 1-1/2 ton 2-Wheel W/E *	W95811	Trailer Flatbed: M1082 LMTV W/Dropsides	T96564	19	X	
Trucks						
Truck Utility: Heavy Variant 10000 GVW *	T07679	Truck Utility: M1152A1	T37588	53	X	
Truck Utility: Armor Ready M1151A1 *	T34704	Truck Utility: Up Armored HMMWV	T92446	18	X	
Truck Utility: M1152A1 *	T37588	Truck Utility: M1152	T11588	28	X	
Truck Cargo: Heavy PLS 15-16.5T 10X10 *	T40999	Truck Cargo: Heavy PLS 15-16.5T 10X10	T41067	48	X	
Truck Cargo: Heavy PLS 15-16.5T 10X10 *	T40999	Truck: PLS	T81874	292	X	
Truck Cargo: MTV W/E W/W *	T41135	Truck Cargo: MTV W/E	T61908	74	X	
Truck Cargo: MTV W/E W/W *	T41135	Truck Cargo: MTV LWB W/E W/W	T61772	1	X	
Truck Cargo: MTV W/E W/W *	T41135	Truck Cargo: Dropside 5-ton 6X6 W/E	X40794	47	X	
Truck Cargo: MTV W/E W/W *	T41135	Truck Cargo: 5-ton W/W	T41447	22	X	
Truck Cargo: MTV W/E W/W *	T41135	Truck Cargo: Dropside 5-ton 6X6	X40931	89	X	
Truck Van: Expansible MTV M1087A1 *	T41271	Truck: Expandable Van wo/Winch	T67136	105	X	
Truck Van: Expansible MTV M1087A1 *	T41271	Truck Van: Expansible 5-ton 6X6	X62237	32	X	
Truck Tractor: Heavy Equip Transport *	T59048	Truck Tractor: XM1070A1	T05012	90	X	
Truck Cargo: wo/Winch *	T59448	Truck Cargo: 4X4 LMTV W/E W/W	T60149	1	X	
Truck Cargo: wo/Winch *	T59448	Truck Cargo: 4X4 LMTV W/E	T60081	17	X	
Truck Cargo: 4X4 LMTV W/E *	T60081	Truck Cargo: Dropside 5-ton 6X6 W/E	X40794	97	X	
Truck Cargo: 4X4 LMTV W/E *	T60081	Truck Cargo: 2 1/2 ton 4X4 LMTV	T41995	6	X	
Truck Cargo: 4X4 LMTV W/E *	T60081	Truck Cargo: 2.5-ton W/W	T42131	45	X	
Truck Cargo: 4X4 LMTV W/E *	T60081	Truck Cargo: 4X4 LMTV W/E W/W	T60149	63	X	
Truck Cargo: 4X4 LMTV W/E *	T60081	Truck Cargo: Dropside 5-ton 6X6	X40931	38	X	
Truck Cargo: 4X4 LMTV W/E *	T60081	Truck Cargo: wo/Winch	T59448	911	X	
Truck Cargo: 4X4 LMTV W/E W/W *	T60149	Truck Cargo: 2.5-ton W/W	T42131	53	X	
Truck Cargo: 4X4 LMTV W/E W/W *	T60149	Truck Cargo: wo/Winch	T59448	48	X	
Truck Cargo: 4X4 LMTV W/E W/W *	T60149	Truck Cargo: Dropside 5-ton 6X6	X40931	21	X	
Truck Cargo: 4X4 LMTV W/E W/W *	T60149	Truck Cargo: 4X4 LMTV W/E	T60081	42	X	
Truck Tractor: MTV W/E	T61239	Truck Tractor: 5-ton 6X6 W/E	X59326	293	X	
Truck Tractor: MTV W/E *	T61239	Truck Tractor: wo/Winch	T88983	323	X	
Truck Tractor: MTV W/E *	T61239	Truck Tractor: 5-ton 6X6 W/W W/E	X59463	36	X	
Truck Tractor: MTV W/E *	T61239	Truck Tractor: MTV W/E W/W	T61307	7	X	
Truck Utility: 1-1/4 ton HMMWV *	T61494	Truck Utility: 1-1/4 ton HMMWV	T61562	36	X	
Truck Utility: 1-1/4 ton HMMWV *	T61494	Truck Utility: HMMWV 10000 GVW	T07679	6,697	X	
Truck Utility: 1-1/4 ton HMMWV *	T61494	Truck Utility: M1165	T38873	13	X	
Truck Utility: 1-1/4 ton HMMWV *	T61494	Truck Utility: M1152A1	T37588	685	X	
Truck Utility: 1-1/4 ton HMMWV *	T61494	Truck Utility: M1152	T11588	18	X	

USAR
Major Item of Equipment Substitution List

Required Item Nomenclature[1]	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes	No
Truck Utility: 1-1/4 ton HMMWV *	T61494	Truck Utility: M1165A1	T56383	1,351	X	
Truck Utility: 1-1/4 ton HMMWV *	T61562	Truck Utility: M1152A1	T37588	31	X	
Truck Utility: 1-1/4 ton HMMWV *	T61562	Truck Utility: M1165A1	T56383	2	X	
Truck Utility: 1-1/4 ton HMMWV *	T61562	Truck Utility: Heavy Variant 10000 GVW	T07679	37	X	
Truck Utility: HMMWV M1113 *	T61630	Truck Utility: Heavy Variant 10000 GVW	T07679	101	X	
Truck Utility: HMMWV M1113 *	T61630	Truck Utility: M1152	T11588	1	X	
Truck Utility: HMMWV M1113 *	T61630	Truck Utility: M1152A1	T37588	265	X	
Truck Cargo: MTV LWB W/E *	T61704	Truck Cargo: LWB wo/Winch	T93271	97	X	
Truck Cargo: MTV W/E *	T61908	Truck Cargo: Dropside 5-ton 6X6 W/E	X40794	470	X	
Truck Cargo: MTV W/E *	T61908	Truck Cargo: Dropside 5-ton 6X6	X40931	49	X	
Truck Cargo: MTV W/E *	T61908	Truck Cargo: 5-ton W/W	T41447	5	X	
Truck Cargo: MTV W/E *	T61908	Truck Cargo: MTV W/E W/W	T41135	6	X	
Truck Cargo: MTV W/E *	T61908	Truck Cargo: 5-ton wo/Winch	T41515	1,350	X	
Truck Wrecker: 8X8 Heavy Mobility *	T63093	Truck Wrecker: M984A4	T63161	113	X	
Truck Dump: MTV W/E *	T64911	Truck Dump: 5-ton 6X6 W/W W/E	X43845	21	X	
Truck Dump: MTV W/E *	T64911	Truck Dump: 5-ton 6X6 W/E	X43708	160	X	
Truck Dump: MTV W/E *	T64911	Truck Dump: 10 ton wo/Winch	T65342	144	X	
Truck Dump: MTV W/E W/W *	T64979	Truck Dump: 5-ton 6X6 W/E	X43708	27	X	
Truck Dump: MTV W/E W/W *	T64979	Truck Dump: 5-ton 6X6 W/W W/E	X43845	8	X	
Truck Dump: MTV W/E W/W *	T64979	Truck Dump: MTV W/E	T64911	5	X	
Truck Tank: Fuel Servicing 2500G *	T87243	Truck Tank: wo/Winch	T58318	100	X	
Truck Tank: Fuel Servicing 2500G 8X8 *	T87243	Truck Tank: Fuel Servicing 2500G 8X8	T58161	22	X	
Truck Tractor: wo/Winch *	T88983	Truck Tractor: 5-ton 6X6 W/E	X59326	13	X	
Truck Tractor: LET 6X6 66000 GVW *	T91656	Truck Tractor: LET	T60946	6	X	
Truck Utility: Armored HMMWV *	T92242	Truck Utility: Armored HMMWV	T92310	1	X	
Truck Utility: Armored HMMWV *	T92310	Truck Utility: Armor Ready M1151A1	T34704	4	X	
Truck Utility: Armored HMMWV *	T92310	Truck Utility: Armored HMMWV	T92242	54	X	
Truck Utility: Up Armored HMMWV *	T92446	Truck Utility: Armor Ready M1151A1	T34704	1,833	X	
Truck Van: LMTV W/E *	T93484	Truck Van: M1079A1P2 wo/Winch	T62359	116	X	
Truck Wrecker: MTV W/E W/W *	T94709	Truck Wrecker: 5-ton 6X6 W/W W/E	X63299	69	X	
Truck Wrecker: MTV W/E W/W *	T94709	Truck Wrecker:	T94671	17	X	
Truck Cargo: Tactical 8X8 LHS *	T96496	Truck Palletized (LHS): M1120A4	T55054	499	X	

1. "*" indicates a Critical Dual Use (CDU) equipment item

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Table 8

Significant Major Item Shortages

NOTE: This table provides a RC top ten prioritized (PR) shortage list for major equipment items 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 equipment data submitted by the Service.

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	Tactical Light Truck (Armor-capable HMMWV)	18,738	11,912	$185,373	$2,208,163,176	37% of the fleet is projected to meet HMMWV armor-capable requirements by FY 2017. The HMMWV Recapitalization program terminated in FY 2010. Joint Light Tactical Vehicle (JLTV) distribution is not scheduled until FY 2022.
2	Combat Mobility	8,517	2,880	$106,259	$306,025,920	Army Reserve route clearance companies are the basis for the majority of equipment shortages.
3	Field Logistics (Liquid Logistics / Material Handling)	9,434	2,302	$77,867	$179,250,419	The Army Reserve provides over 50% of the logistics capability footprint for the Army. Modernization shortages exist for liquid logistics, maintenance, and material handling systems.
4	Medical Field Systems	19,200	4,143	$66,344	$274,863,192	Due to rapid changes in medical technology and projected sustainment costs, only 4 of 16 required modern medical equipment sets are fielded and centrally managed for Army Reserve Combat Support Hospitals. Thirty medical triage training sets are required to maintain proficiency.
5	Tactical Heavy Truck (Armor-capable)	4,807	1,931	$239,645	$462,754,495	USAR will field 60% of the total heavy fleet armor-capable requirements by FY 2017. However, only 43% of the M915 line haul capability will be armor-capable.
6	Battle Command Systems	80,002	10,969	$16,976	$186,209,744	Budget decrements have pushed fielding of key modern network enablers and applications to FY 2017 or beyond.
7	Tactical Medium Truck (Armor-capable)	4,976	1,911	$206,785	$395,166,135	Medium Tactical Vehicle (MTV) programs are fully funded based on projected deliveries. USAR will exceed 90% of armor-capable requirements by FY 2017.
8	Battle Command Transport Networks	99,958	31,069	$9,547	$296,615,743	The shortage cost is primarily a modernization issue. The Army Reserve is only 33% modernized in Battle Command Transport Networks.
9	Aviation Support Systems	3,947	991	$152,457	$151,084,887	Shortages are primarily associated with the conversion of two helicopter battalions from AH-64 attack to UH-60 assault units.
10	Force Protection	214,555	142,025	$1,662	$236,045,550	The Nuclear-Biological-Chemical Reconnaissance Vehicle (NBCRV), a Stryker-based platform incorporating multiple detection systems, accounts for $211M of the Force Protection shortfall. USAR is projected to fill 65% of the modern requirement in FY 2017.

Chapter 3
United States Marine Corps Reserve

I. Marine Corps Overview

"Our nation has long recognized the need for a ready expeditionary force, one able to deter those who would do us harm, swiftly intervene when they act to do so, and fight to win where the security interests of our nation are threatened."[1]No matter where they serve or what the mission, the Marine Corps continues to be the Nation's Expeditionary Force in Readiness. Since the founding of our corps, Marines have been guided by corps values, honor, courage, and commitment. They continue to hold true to professional ethos deeply rooted in discipline, fidelity, and sacrifice. More than a decade of sustained combat operations has forged a force of courageous, compassionate leaders and warriors who understand that hard training and a willingness to sacrifice are what make our Corps one of the most capable fighting forces the world has ever known.

> This past year, Marines have been actively engaged in every corner of the global security environment. The Marine Corps continued to meet operational commitments in Afghanistan, while simultaneously working with more than 90 allies and partners to train, to learn, and to build effective security institutions. In addition to forces committed to Operation Enduring Freedom (OEF), our Marine Expeditionary Units (MEUs), in partnership with Navy Amphibious Ready Groups (ARGs), continued to patrol regions of likely crisis. Other task-organized Marine Air Ground Task Forces (MAGTFs), operating from expeditionary locations, supported U.S. national security objectives through forward presence, deterrence, multinational theater security cooperation exercises, and building partner capacity. Marines have been active in every geographical combatant command, serving as a key component of the joint force. Even under fiscal restraint, we will continue to support these strategically important activities to the greatest extent possible.[2]

As Marine Corps commitments in Afghanistan decrease through 2014, routine participation in forward presence and crisis response missions will again become the primary focus of the Marine Corps Reserve.

First and foremost, Marine forces are amphibious in character and at their best when operating in close partnership with the United States Navy. To maximize flexibility, strategic agility, and responsiveness, the Marine Corps is optimized for rapid deployment, versatile employment, and self-sustainment via a MAGTF that consists of four core elements: a command element, a ground combat element, an aviation combat element, and a logistics combat element. MAGTFs are a potent and capable middleweight fighter filling the seam between the Nation's heavy conventional force and its special operations force. Each MAGTF includes a Reserve capability that is designed to seamlessly integrate with the Active Component (AC) forces when needed. MAGTFs are light enough to arrive rapidly at the scene of a crisis yet heavy enough to carry the day and sustain themselves upon arrival.

[1] *The Posture of the United States Marine Corps,* April 2013, pg. 2.
[2] *The Posture of the United States Marine Corps,* April 2013, pg. 4.

"Operating in partnership with the Navy, MAGTFs create the strategic asymmetries that make the joint force so effective on the modern battlefield. Amphibious and expeditionary capabilities contribute to each of the ten mission areas of the joint force, and are directly responsive to the security demands articulated in the President's *Defense Strategic Guidance for the 21st Century*."[3]

A. Marine Corps Planning Guidance

1. Strategic Concept of the Marine Corps

We are committed to optimizing our force structure for crisis response and forward presence.

> As we move into FY 2014 and beyond, our budget submission balances our force structure, our readiness, and our capability to meet national security commitments. A critical measure of the effectiveness of our Marine Corps is its readiness. Our readiness is preserved through a careful balance of high quality people, well-trained units, modernized equipment, well-maintained installations, and a force level sufficient to accomplish our many missions. Failure in any one of these pillars of readiness begins to set the conditions for an eventual hollowing of the force.[4]

We also understand the importance of tailoring our limited resources to our structure and, where necessary, "living with what is good enough."

2. Marine Corps Total Force Concept

Within the Marine Corps, the AC and Reserve Component (RC) are integrated as a total force.

> Reserve component units are similar to their Active Component counterparts in structure, capability, and equipment and they maintain the same fundamental individual and unit training standards. This enables them to conduct assigned missions in a manner commensurate to their active counterparts after appropriate pre-deployment training. The Reserve Component serves to augment and reinforce Active Component Marine Air Ground Task Forces (MAGTFs), but also maintains the capability to task-organize into MAGTFs composed entirely of Reserve units.[5]

The RC is purpose-built and able to provide the strategic depth and operational augmentation that make it a critical "shock absorber" for America's Expeditionary Force in Readiness.

B. Marine Corps Equipping Policy

The Marine Corps develops a Total Force Approved Acquisition Objective (AAO) for each new item of equipment using an integrated system of dynamic processes. These processes capitalize on operational experience to identify, define, and meet the emerging needs of Marine forces in support of combatant commander (CCDR) requirements. The Marine Corps also uses a push-fulfillment process to sustain major end items. This materiel management approach ensures that equipment is sourced and aligned with the Commandant of the Marine Corps' equipping

[3] *The Posture of the United States Marine Corps*, April 2013, pg. 3.
[4] *The Posture of the United States Marine Corps*, April 2013, pg. 14.
[5] *Guidance for Integration of the Total Force*, November 2013, pg. 1, 2.

strategies. It also reduces latency in distribution and improves visibility and transparency of the materiel distribution process.

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 (MARCORSYSCOM) procures equipment for the RC, with all 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. This methodology for "global sourcing" has been used effectively to satisfy both AC and RC unit equipment shortfalls.

D. Initiatives Affecting RC Equipment

Due to sequestration and budget cuts, the Marine Corps will be forced to reduce or cancel modernization programs and infrastructure investments while maintaining readiness for both AC and RC Marines. "Money that should be available for procuring new equipment will be rerouted to maintenance and spares for legacy equipment, including a 42-year-old Nixon-era amphibious assault vehicle."[6] Though some funding will be rerouted to maintenance and spares for legacy equipment, maintaining this equipment over time will become more costly. These budget cuts will have a significant effect on the RC's ability to maintain its legacy equipment which in turn will have a negative effect on its training and overall readiness.

E. Plan to Achieve Full Compatibility between AC and RC

Concurrent horizontal fielding of new equipment to the AC and RC by MARCORSYSCOM maintains common and interchangeable capability sets within the Total Force. This fielding policy complements the "mirror–imaging" and push-fulfillment sustainment policies, both of which significantly contribute to optimizing equipment supportability and associated unit operational readiness.

[6]Commandant of the Marine Corps Testimony from House Armed Services Committee Hearing on "Planning for Sequestration in Fiscal Year 2014 and Perspectives of the Military Services on the Strategic Choices and Management Review", September 18, 2013.

II. Marine Corps Reserve Overview

A. Current Status of the Marine Corps Reserve

1. General Overview

Top RC Equipping Challenges

- Transition to the KC 130J Super Hercules
- Procurement of the RQ-21A Blackjack Small Tactical Unmanned Aircraft System (STUAS)

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, 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 their Nation's call to arms.

> Marine Reserve Forces continue to serve as a strong force multiplier of the total force, and are a high-payoff investment in capability. Since September 11, 2001, more than 60,000 Marine Reservists, from all across the United States, have participated in over 80,000 activations or mobilizations. Our Reserve Marines are uniquely well-positioned to seamlessly integrate with the AC, to reinforce our service priorities, and to provide a reservoir of capacity for future national emergencies. Our Reserve Marines are well-equipped and highly trained professionals, providing an essential shock absorber for the active component in the uncertain global environment.[7]

Marine Forces Reserve (MARFORRES) is capable of simultaneously fulfilling its role as both an operational and a strategic force. In the operational role, MARFORRES sources preplanned, rotational, and routine CCDR and Service requirements across the spectrum of military operations. In addition to supporting operations in Afghanistan, MARFORRES concurrently sources CCDR requirements, such as the Special Purpose–MAGTF Africa in support of United States Africa Command, the Black Sea Rotational Force in support of United States European Command, the Unit Deployment Program in support of United States Pacific Command, and the Southern Partnership Station in support of United States Southern Command. Additionally, MARFORRES continues to perform its strategic role with CCDR 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 Force Structure Review Group (FSRG) decisions, the transfer and maintenance of affected equipment remains an equipping and maintenance challenge for the force. Similarly, as additional capabilities are developed within the RC, the requirement to sustain the associated equipment also increases. FSRG transitions will take several more years to complete and will require continued attention to ensure the most efficient fielding, sustainment, and transfer of equipment.

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 scheduled for delivery in 2014. 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

[7] *The Posture of the United States Marine Corps,* April 2013, pg. 18.

training. The total cost to purchase all 28 RC KC-130J aircraft is more than $2B. Currently, only five of the 28 airframes are programmed across the Future Years Defense Program (FYDP).

The RQ-21A will provide the Marine Expeditionary Force and subordinate commands (divisions and regiments) a dedicated intelligence, surveillance, and reconnaissance system capable of delivering intelligence products directly to the tactical commander in real time. This program is still in low rate initial production with AC procurement beginning in FY 2014. The RC is scheduled to receive the RQ-21A at the end of the current fielding plan but, falls outside of the FYDP. Lack of these systems creates a significant capability gap between RC and AC forces.

2. Status of Equipment

Reserve equipment inventory levels have increased over the past three years. This increase is primarily due to the fielding of new equipment to meet newly established unit capabilities. As the capability sets in the RC adapt to fulfill new roles in support of FSRG initiatives, so must the equipment. With the unique geographic dispersion of our Reserve units and their limited storage capacity, proper accountability of equipment and validation of the T/A is essential while maintaining overall readiness. MARFORRES will continue to meet the Commandant's first priority to provide the best trained and equipped Marine units 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. NGREA has been a vital resource in these efforts.

a. Equipment On-hand

The Marine Corps has maintained the RC's ability to train through its use of a T/A that is not routinely utilized to source operational requirements. The equipment on-hand, outlined in *Table 1*, reflects the items possessed by MARFORRES units beginning in FY 2015. This on-hand quantity does not reflect the (additional) equipment available to fill the delta between TO&E and the T/A through global sourcing to meet full wartime requirements. The majority of the $893M (TO&E vs. T/A) delta is not a deficiency resulting from a lack of procurement funding; rather, it reflects T/A utilization and prioritization of fielding to meet operational requirements. Therefore, 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 the age of 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 that will extend the life cycle of that equipment through upgrades and modifications.

c. Compatibility of Current Equipment with Active Component

Although complete compatibility is difficult to achieve due to high equipment demand for force generation, training support, and the application of funds against higher priority requirements, equipment compatibility between the AC and RC is closer than ever. Most existing cases where compatibility is lacking are the result of fiscal constraints that have delayed the RC fielding of

new equipment programs. The Marine Corps continues to use NGREA funding to accelerate the RC fielding of new equipment programs. The positive impact of NGREA on improving Total Force compatibility cannot be overstated.

d. Maintenance Issues

With minimal full-time active duty support and limited time to train reserve maintenance personnel, sustainment of the RC equipment sets has been accomplished through the use of Contracted Logistics Support (CLS) teams. The Logistics Mobile Maintenance Team, the Small Arms Repair Teams, and the Corrosion Prevention and Control Team have become an integral part to the sustainment of RC equipment during deployment. Costs associated with these teams were primarily funded through the use of supplemental funding associated with the repair of RC pre-deployment training equipment and weapons that were deployed in support of overseas contingency operations. As the force transitions back to its organic maintenance requirements, units must be able to perform required maintenance and operate within the limits of their Operation and Maintenance (O&M) funding. With supplemental funding and plus-ups coming to an end in FY 2014 and a reduction of funding across the DoD, funding for CLS will no longer be available. This may cause a downgrade in equipment readiness until maintenance facilities adjust schedules back to their pre-deployment levels.

e. Modernization Programs and Shortfalls

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

- Training and Simulators: 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. Utilizing FY 2011 through FY 2013 NGREA funding, the RC has been able to (or is programmed to) procure nearly $102M worth of aircraft Flight Training Devices (FTDs). The addition of these FTDs and their linkage via the Aviation Virtual Training Environment 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 Generation IV Abrams Ammo Racks and Tank Suspension upgrades, and the development of survivability upgrades to the Light Armored Vehicle (LAV). NGREA funding accounted for nearly $20M in tank upgrades and nearly $18M in LAV upgrades. The majority of the Marine Corps' combat equipment modernization programs are already in the fielding phase or within the final phase 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, from the CH-46E to the MV-22B, and from 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 command, control, communications, and computer systems (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 Expeditionary Command and Control Suite and the Data Distribution System Module, will accelerate the fielding of these critical tactical communications systems. Furthermore, the procurement and integration of information technology upgrades will further complement and enhance the Marine Corps' Next Generation Enterprise Network architecture and 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

The impact of Sequestration on both ground and aviation equipment presents additional challenges for the RC. Budget cuts will adversely affect the RC’s ability to perform preventive maintenance and limited technical inspections. Due to geographic dispersion of units, lack of maintenance funding has the potential to downgrade overall force readiness.

C. Future Years Program (FY 2015–FY 2017)

1. FY 2017 Equipment Requirements

The Marine Corps develops a Total Force AAO 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-22B 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 began its transition to the MV-22 in FY 2013 with a completion date slated for the fourth quarter of FY 2018. Marine Medium Helicopter Squadron 764 (HMM-764) began its transition in the third quarter of FY 2013 with

HMM-774 scheduled to begin its transition in the third quarter of FY 2016. The RC MV-22B transition schedule is an important goal for the Marine Corps.

b. KC-130J Super Hercules

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 2014. Five aircraft are programmed in 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 Reserve. It is also the most expensive Reserve equipment shortfall, costing $2B.

c. UH-1Y Venom

The UH-1Y is a multi-role, multi-mission, utility helicopter developed to replace the UH-1N. The UH-1Y utility helicopter is fully capable of shipboard operations worldwide, including take-off, landing, refueling and rearming. Its mission capabilities include airborne command and control, aeromedical evacuation, troop transport, and search and rescue. Marine Light Attack Helicopter Squadron 773 will receive its first UH-1Y aircraft in the third quarter of FY 2014 and will complete its transition in the second quarter of FY 2015.

d. RQ-21A Blackjack

The RQ-21A Blackjack is a multi-role, multi-mission, unmanned aircraft system (UAS) that is employed primarily as an intelligence, surveillance, reconnaissance, and target acquisition asset. Each system consists of five air vehicles, two ground control stations, one launcher, one recovery system, and associated support equipment. The expeditionary nature of the RQ-21A makes it possible to deploy a multi-intelligence capable UAS with minimal footprint, ideal for amphibious, humanitarian and/or combat operations.

3. Anticipated New Equipment Requirements

a. Ground/Air Radar Systems

A highly mobile multi-mission radar system designed to fully support worldwide expeditionary requirements is needed to replace legacy radar systems. An advanced radar system is required to provide a multi-faceted detection and tracking capability to enable engagements of a wide range of hostile threats. Currently in the engineering and development phase, AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR) system offers a robust air traffic control capability to ensure the safety of Marines worldwide. Operational capabilities enhanced by proven Active Electronically Scanned Array radar technology give the AN/TPS-80 G/ATOR system the ability to perform multi-mission tasks at significantly lower O&M costs compared to existing radar systems. In addition to providing a broad range of optimized radar capabilities, AN/TPS-80 G/ATOR

provides automatic adaptability via scalable open system architecture. G/ATOR's multi-network capability ensures compatibility with additional DoD command and control systems.

b. Multi-mission, Medium-altitude, Long-endurance Unmanned Aircraft System

The Marine Corps Tactical UAS (MCTUAS) requirements are currently being supported by the RQ-7B Shadow. In accordance with the Commandant's Aviation Plan, the RQ-7B is scheduled for replacement at some point beyond the FYDP. The future MCTUAS platform will incorporate increased cruise time, wide-range sensors, multi-mode communications suite, and precision weapons. Acquisition and fielding of a large group UAS will further enable the Marine Corps to accomplish the following missions in support of the MAGTF: intelligence, surveillance, reconnaissance, electronic warfare, close air support, combat search and rescue, precision strike, buddy-laser, convoy/raid overwatch, route clearance, target development, and terminal air guidance.

c. Amphibious Combat Vehicle

The Amphibious Combat Vehicle (ACV) is a program providing advanced generation fully amphibious, armored lift capability to the Marine Air Ground Task Force. ACV supports ship-to-objective maneuvers by providing the capability to self-deploy from amphibious ships. A seamless transition between sea and land enables the seizure of beach landing zones where conditions preclude other types of entry, and facilitates rapid build-up of combat power ashore before an enemy can react. The Marine Corps needs the ACV to achieve an over-the-horizon, joint forcible-entry capability that aligns with future amphibious concepts of operation. The ACV acquisition strategy is in development and subject to Marine Corps decision regarding required capabilities.

4. Anticipated Transfers from AC to RC

One KC-130J aircraft is scheduled to be transferred from the AC to the RC in FY 2014 and two in FY 2015 to initiate the transition plan from the KC-130T. Eight MV-22B aircraft are scheduled to be transferred from the AC to the RC in FY 2014, four in FY 2015 and 12 in FY 2016 to initiate the transition plan from the CH-46E. Four AH-1W aircraft are scheduled to be transferred from the AC to the RC in FY 2014 and two in FY 2015 to backfill previous foreign military sales and preapproved OEF support requirements.

5. 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 2014, in synchronization with the AC AH-1Z fielding.

6. Equipment Shortages and Modernization Shortfalls at the End of FY 2017

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 2017. *Table 8* presents the RC’s 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 equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Aircraft							
Aircraft, Fighter/Attack, F/A-18A++	F/A-18A++	$54,436,016	15	15	15	15	15
Aircraft, Fighter, F-5F	F-5F	$14,830,970	1	1	1	1	1
Aircraft, Fighter, F-5N	F-5N	$702,466	11	11	11	11	11
Aircraft, Refueling/Cargo, KC-130J	KC-130J	$80,121,410	2	5	5	7	28
Aircraft, Refueling/Cargo, KC-130T	KC-130T	$45,480,270	26	14	14	14	0
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
Helicopter, Attack, AH-1W	AH-1W	$18,935,714	16	18	18	18	18
Helicopter, Utility, UH-1Y	UH-1Y	$30,826,000	7	9	12	12	9
Helicopter, Cargo, CH-53E	CH-53E	$37,658,528	6	6	6	6	8
Helicopter, Cargo, CH-46E	CH-46E	$14,983,188	8	0	0	0	0
Tilt-rotor, Cargo, MV-22B	MV-22B	$73,711,789	8	12	24	24	24
RQ-7B Shadow System	RQ-7B	$22,433,000	2	2	2	2	3
RQ-21A Blackjack System	RQ-21A	$10,000,000	0	0	0	0	3
Tactical Operational Flight Trainer, F/A-18A++	F/A-18A++ TOFT	$6,500,000	1	1	1	1	1
Flight Training Device, KC-130J	KC-130J FTD	$28,000,000	0	0	1	2	2
Fuselage Trainer, KC-130J	KC-130J FUT	$12,000,000	0	0	0	0	2
Cockpit Procedures Trainer, KC-130J	KC-130J CPT	$7,000,000	0	1	1	1	2
Observer Training Aid, KC-130J	KC-130J OTA	$1,000,000	0	0	0	0	2
Aircrew Procedures Trainer, AH-1W	AH-1W APT	$5,000,000	0	1	1	1	1
Flight Training Device, UH-1Y	UH-1Y FTD	$16,500,000	0	0	2	2	3
Flight Training Device, CH-53E	CH-53E FTD	$14,000,000	0	0	1	1	1
Containerized Flight Training Device, MV-22B	MV-22B CFTD	$12,000,000	0	0	2	2	2
Institutional Mission Simulator, RQ-7B	RQ-7B IMS	$900,000	1	1	1	1	1
Communications & Electronics							
Theater Battle Management Core System, AN/TYY-2	A0013	$277,468	1	1	1	1	1
Communications Data Link System, TYQ-101A	A0021	$324,501	2	2	2	2	2
Communications Platform, Air Defense (ADCP)	A0025	$907,000	3	3	3	3	3
Teams Antenna	A0061	$145,000	78	78	78	78	91
Radio Set, AN/MRC-148	A0067	$53,234	170	170	170	170	170
AN/GRC-256A, Radio Set, HF	A0068	$40,000	4	4	4	4	4
AN/TSR-9 E88XR Global Broadcast System TGRS	A0090	$194,063	16	16	16	16	16
Radio Set, AN/VRC-110, 50-watt	A0097	$14,000	973	973	973	973	1,743

USMCR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Survey Instrument, Azimuth, M111	A0116	$150,000	10	10	10	10	10
Satellite Comm Terminal, Phoenix AN/TSC-156	A0122	$1,813,000	10	10	10	10	10
Remote Subscriber Access Module (RSAM) AN/TTC-63	A0124	$69,886	103	103	105	105	105
Deployable End Office Suite	A0125	$461,217	32	32	32	32	33
Radio System, AN/VRC-103(V)2	A0126	$39,667	391	391	391	391	422
Radio Set, AN/PRC-152(V3)	A0129	$4,800	1,108	1,108	1,108	1,108	2,087
Deployable Integrated Transport Suite (DITS)	A0132	$302,104	23	23	23	23	33
Radio Set, AN/TRC-209	A0139	$47,828	73	73	73	73	109
Antenna, Communication, Trailer-mtd, AS-4429D/TSC	A0149	$495,000	2	2	2	2	9
Radio Set, AN/MRC-142C	A0153	$224,839	36	36	36	36	63
DDS-R/M Communications Security Module (CSM)	A0173	$44,550	27	27	27	27	91
DDS-R/M LAN Service Module (LSM)	A0174	$92,330	20	20	20	20	91
DDS-R/M Configuration Module (CM)	A0175	$2,615	17	17	17	17	116
DDS-R/M LAN Extension Module ON-704/TYC	A0176	$27,930	79	79	79	79	363
DDS-R/M Application Server Module (ASM), AN/TYQ-147	A0177	$14,980	20	20	20	20	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	19	19	19	19	33
SWAN D (V2)	A0241	$90,000	8	8	8	8	13
Satellite Communication Subsystem	A0242	$295,000	9	9	9	9	14
SWAN D Network Package	A0243	$90,000	33	33	33	33	60
Support Wide Area Network MRT	A0244	$105,000	5	5	5	5	11
Combat Operations Center, Set III - AN/TSQ-239(V)3	A0254	$1,848,286	6	6	6	6	11
Combat Operations Center, Set IV - AN/TSQ-239(V)4	A0255	$1,372,700	21	21	21	21	22
Radio Set, AN/VRC-104(V)5	A0266	$50,378	50	50	50	50	140
Combat Operations Center	A0271	$2,500,000	1	1	1	1	3
SCA Multiband Networking Radio	A0336	$28,908	257	257	257	257	489
SCA Multiband Network Veh Radio Sys, AN/VRC-114(V)1	A0352	$17,900	14	14	14	14	339
Digital Tech Control (DTC), Facility, AN/TSQ-227	A0499	$1,213,000	6	6	6	6	7
Satellite 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	8
Interrogator, Digital, AN/UPX-37	A0880	$118,902	7	7	7	7	8
Joint Tactical Information Distribution System (JTIDS), AN/URC-107(V)10	A0882	$683,000	3	3	3	3	3
Tactical Cop Workstation	A0932	$10,000	103	123	123	123	152
Network Manager, EPLRS, AN/PSQ-25	A1225	$5,889	18	18	18	18	24
Radar Set, Firefinder, AN/TPQ-36/46	A1440	$7,500,000	5	5	5	5	5
Radar Set, Air Traffic Control, AN/TPS-63B	A1500	$377,777	1	1	1	1	2
Radar Set, LW3D, AN/TPS-59(V)3	A1503	$15,217,555	2	2	2	2	2
Radio Set, AN/GRC-171B(V)4	A1818	$55,874	22	17	17	17	17

USMCR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Radio Set, AN/MRC-145A	A1957	$43,986	220	220	220	220	286
Radio Set, AN/PRC-150	A2042	$19,247	843	755	755	755	755
Radio Set, Multiband, Urban	A2043	$7,115	874	874	874	874	1,053
Radio Set, Multiband, Maritime	A2044	$7,431	243	243	243	243	755
Radio Set, Multiband, FALCON II, AN/PRC-117F	A2068	$27,450	912	912	912	912	1,749
Radio Set, AN/PRC-119F	A2079	$4,346	584	584	584	0	0
Radio Set, EPLRS, AN/VSQ-2D(V)2	A2152	$35,714	266	266	266	266	364
Radio Terminal Digital, Troposcatter, AN/TRC-170	A2179	$1,500,000	28	28	28	28	28
Facility, Anti-Air Warfare, Sector, AN/TYQ-87(V)2	A2390	$427,000	1	1	1	1	3
Tactical Air Operations Module, AN/TYQ-23(V)4	A2525	$8,054,500	2	2	2	2	2
Command System, Tactical, AN/USC-55A	A2551	$280,000	3	2	2	2	2
Advanced Field Artillery Tactical Data System, AN/GYK-60	A2555	$44,143	173	153	153	153	153
Target Locator, Designator & Hand-off System (TLDHS) (BLKII), AN/PSQ-19A	A2560	$27,000	150	150	150	150	237
Interrogator Computer, TSEC/KIR-1C	A8018	$1,499	7	7	7	7	11
Transponder Computer, TSEC/KIT-1C	A8019	$1,254	9	9	9	9	9
Engineer							
Air Conditioner, 1.5-ton, 60Hz, R-407C	B0003	$8,461	104	104	104	104	106
Air Conditioner, 5-ton, 60K Btu	B0008	$20,167	105	105	105	105	146
Air Conditioner, 10-ton, R-407C	B0010	$30,961	9	9	9	9	12
Environmental Control Unit (Air Conditioner)	B0014	$15,092	354	354	354	354	562
Integrated Trailer ECU	B0018	$85,000	50	9	9	9	9
Hydroseeder, Skid-mounted	B0026	$25,650	3	3	3	3	6
Distribution System, Mobile Elect Power, 5kW (Indoor)	B0027	$4,500	177	177	177	177	180
Distribution System, Mobile Elect Power, 5kW (Outdoor)	B0028	$7,500	289	289	289	289	348
Distribution System, Mobile Elect Power, 15kW	B0029	$8,800	116	116	116	116	129
Distribution System, Mobile Elect Power, 30kW	B0030	$16,100	97	97	97	97	101
Distribution System, Mobile Elect Power, 100kW	B0031	$28,500	62	62	62	62	65
Distribution System, Mobile Elect Power, 300kW	B0032	$22,100	12	12	12	12	12
All Terrain Crane (ATC) MAC-50	B0038	$578,000	10	10	10	10	26
Airfield Damage Repair (ADR) Kit, GBE Runway REP	B0039	$450,000	3	3	3	3	7
Tractor, Medium	B0060	$253,000	44	44	44	44	56
Tractor, Wheeled, Multipurpose (TRAM) 624K	B0063	$123,508	93	93	93	93	103
Air Conditioner, 60Hz, R-407C	B0074	$8,984	31	31	31	31	47
Grader, Road, Motorized, 120M	B0078	$236,008	14	14	14	14	21
Boat, Bridge Erection, USCSBMK3	B0114	$249,187	6	6	6	6	63
Bridge, Medium Girder (MGB), Dry Gap	B0152	$964,515	6	6	6	6	12
Container Handler, Rough Terrain, KALMAR	B0392	$525,000	6	6	6	6	11
Detector, Mine, Advanced, AN/PSS14 w/TWD	B0476	$19,175	111	0	0	0	0
Excavator, Armored Combat, M9 ACE	B0589	$1,000,000	4	4	4	4	20
Tactical Airfield Fuel Dispensing System (TAFDS), M1966	B0675	$331,062	1	1	1	1	9

USMCR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Fuel System, Amphibious Assault, M69HC	B0685	$1,238,680	1	1	1	1	9
Generator Set, 3kW, 60Hz, MEP-831A	B0730	$9,922	226	226	226	226	349
Generator Set, 10kW, 60Hz, TQG MEP-803A	B0891	$10,700	213	213	213	213	329
Generator Set, Skid-mtd, 10kW/400Hz, TQG, MEP813A	B0921	$15,304	8	8	8	8	12
Generator Set, 20kW, MMG 25	B0930	$16,380	23	23	23	23	82
Generator Set, 30kW, 60Hz, MEP-005A/805A/B	B0953	$26,705	91	91	91	91	265
Generator Ltwt, Man-Portable, MEP513A	B0980	$5,262	114	114	114	114	140
Generator Set, 60kW, 400Hz, Skid-mtd, MEP816B	B1016	$29,793	12	12	12	12	12
Generator Set, 60 kW, 60Hz, MEP-006A/806B	B1021	$25,073	111	111	111	111	190
Generator Set, 100kW, 60Hz, TQG MEP-807A	B1045	$67,000	55	55	55	55	99
Refueling System, Expedient, Helicopter	B1135	$101,863	5	5	5	5	9
Fuel Pump Module (SIXCON)	B1580	$23,350	60	60	60	60	136
Roller, Compactor, Vibratory, SP, CS563D	B1785	$155,150	10	10	10	10	10
Storage, Tank, Module, Fuel (SIXCON)	B2085	$6,948	151	151	151	151	431
Storage, Tank, Module, Water (SIXCON) MWT166	B2086	$5,524	71	71	71	71	307
Sweeper, Rotary, Vehicle Mounting	B2127	$215,781	6	6	6	6	6
Loader, Backhoe (BHL), 420E IT	B2483	$83,359	29	29	29	29	34
Forklift, Extended Boom	B2561	$85,556	69	64	64	64	64
Rough Terrain Forklift, Light Capacity	B2566	$110,000	80	80	80	80	89
Tactical Water Purification System (TWPS)	B2605	$350,000	13	13	13	13	33
General Supply							
Mask, Oxygen	C2278	$2,400	146	146	146	146	344
Oxygen System, Portable	C2286	$2,495	118	118	118	118	344
Re-breather Unit, Oxygen, PHAOS, OXCON	C2288	$15,400	17	17	17	17	72
Container, Quadruple (QUADCON)	C4433	$2,475	4,142	4,142	4,142	4,142	5,331
Multi-fuel Engine, Non-gasoline Burning Outboard Engine	C4548	$14,483	62	62	86	71	86
Device, Propulsion, Diver (DPD)	C4549	$77,270	20	20	20	20	37
Parachute, Personnel, Maneuverable (MMPS)	C5649	$17,000	158	158	158	158	261
Raiding Craft, Combat, Rubber, Inflatable, F470	C5901	$16,745	63	63	63	63	78
Motor Transport							
Equipment Transporter, Semitrailer Low-bed, 50-ton, M870A2E1	D0002	$45,600	0	0	0	0	10
Truck, Cargo, MTVR 7-ton Armored, AMK23	D0003	$153,900	89	89	89	89	470
Truck, Cargo, MTVR 7-ton Armored, AMK27	D0005	$181,000	0	0	0	0	90
Truck, Dump, MTVR 7-ton Armored, AMK29	D0007	$173,900	2	2	2	2	40
Truck, RTAA, Tractor, 7-ton, w/o Winch, MK31A1	D0009	$220,000	26	19	19	19	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	48	48	48	48	55
HMMWV, ECV, Enhanced, M1152	D0022	$96,582	392	353	353	353	353
HMMWV, ECV, Armament Carrier, M1151	D0030	$210,000	596	596	596	596	743
Truck, Utility: Expand Capacity, G2/GP Vehicle, M1165	D0031	$154,261	163	120	120	120	120

USMCR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
HMMWV, ECV, TOW Carrier, Armored, M1167A1	D0032	$222,487	30	30	30	30	64
HMMWV, ECV, Armored, M1152 (2-Door)	D0033	$177,000	110	110	110	110	295
HMMWV, ECV, C2/General Purpose, M1165	D0034	$182,164	79	79	79	79	239
Truck, Cargo, MTVR 7-ton, MK23/MK25	D0198	$195,271	467	467	467	467	467
Semitrailer, Refueler, 5000 gal., MK970A	D0215	$214,064	21	21	21	21	64
Semitrailer, 40-ton Low-bed, M870	D0235	$61,710	37	37	37	37	55
Trailer, Cargo, Resupply for HIMARS, MK38	D0861	$56,156	36	36	36	36	36
Trailer, Powered, Wrecker/Recovery, 4X4, MK15A1 Mod 0	D0877	$192,000	9	9	9	9	31
Trailer, Powered, 5th Wheel, Semitrailer, MK16A1 Mod 0	D0878	$81,000	34	34	36	35	74
Trailer, Tank, Water, 400 gal., 1 1/2 ton, 2-wheel, M149A2	D0880	$12,955	193	193	194	191	266
Truck Cargo 22.5-ton, 10X10, LVSR	D0886	$319,529	94	94	94	94	325
Truck, Tractor, 10X10, LVSR	D0887	$330,000	0	0	0	0	59
HMMWV, Ambulance, 4 Litter, Armored, M997	D1001	$90,283	65	83	83	80	89
HMMWV, Ambulance, 2 Litter, Soft Top, M1035	D1002	$68,212	38	38	38	38	40
Truck, Cargo, MTVR 7-ton XLWB, MK27/MK28	D1062	$238,424	93	93	93	93	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	10	10	10	10	24
Truck, Dump, RTAA, 7-ton	D1073	$167,561	34	34	34	34	34
Truck, Wrecker, 10X10, LVSR MK15	D1214	$550,000	0	0	0	0	32
Ordnance & Weapons							
Night Sight, Scout Sniper Medium Range	E0020	$8,795	481	481	481	481	481
Range Finder, Laser	E0042	$79,400	61	61	61	61	71
Launcher, Tubular F/GM(TOW), M41A1 SABER	E0055	$970,000	88	88	88	88	92
Mk 2 Mod 0 MTRS EOD Talon	E0066	$168,525	1	1	1	1	6
Semiautomatic Sniper System (SASS), M110	E0103	$8,500	93	93	93	93	198
Circle, Aiming, M2A2	E0180	$3,913	96	96	96	96	96
Command Launch Unit, Javelin M98A1	E0207	$133,063	50	50	50	50	64
Sight, Thermal, AN/UAS-12C Hybrid	E0330	$116,014	22	22	22	22	28
Howitzer, 155mm, Towed, Lightweight, M777	E0671	$2,500,000	48	48	48	48	48
Assault Amphibious Vehicle (AAV), 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	225	225	225	224	243
Launcher, Tubular F/GM (TOW), M220E4	E0935	$75,742	24	24	24	24	26
Light Armored Vehicle, Anti-Tank, LAV-AT	E0942	$2,091,280	12	12	12	12	24
Light Armored Vehicle, Command/Control, LAV-C2	E0946	$1,924,146	7	7	7	7	10
Light Armored Vehicle, 25mm, LAV-25	E0947	$3,224,110	83	83	83	83	88
Light Armored Vehicle, Logistics, LAV-L	E0948	$1,883,020	18	18	18	18	22
Light Armored Vehicle, Mortar, LAV-M	E0949	$2,507,080	10	10	10	10	12
Light Armored Vehicle, Maintenance/Recovery, LAV-R	E0950	$2,183,920	7	7	7	7	8

USMCR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Machine Gun, .50 cal., Browning, M2	E0980	$8,118	539	539	539	539	648
Machine Gun, .50 cal., M48	E0984	$13,648	51	51	51	51	100
Machine Gun, Medium, 7.62mm, M240B	E0989	$6,000	1,129	1,129	1,167	1,103	1,461
Machine Gun, 40mm, MK-19 Mod3	E0994	$15,320	446	446	446	446	561
Mortar, 60mm, M224	E1065	$64,652	63	63	63	63	72
Mortar, 81mm, M252	E1095	$121,855	68	68	68	68	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	141	141	141	141	149
Rifle, Scoped, Special App (SASR), .50 cal.	E1475	$7,500	71	71	71	71	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	84	84	84	84	84
Test Set, Elect System, Direct Support, AN/USM-615	E1906	$2,274,000	1	1	1	2	5
Sight, Weapon, Thermal, Medium (MTWS)	E1975	$11,300	1,129	1,129	1,167	1,249	1,461
Sight, Weapon, Thermal, Heavy (HTWS)	E1976	$15,653	783	783	819	819	819

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 pre-positioned equipment or assets already in theater from previous rotations.

USMCR
Average Age of Equipment

Table 2

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aircraft, Fighter/Attack, F/A-18A++	F/A-18A++	27	
Aircraft, Fighter, F-5F	F-5F	35	
Aircraft, Fighter, F-5N	F-5N	34	
Aircraft, Refueling/Cargo, KC-130T	KC-130T	24	
Aircraft, Utility/Cargo, UC-12W	UC-12W	3	
Aircraft, Utility/Cargo, UC-35C	UC-35C	14	
Aircraft, Utility/Cargo, UC-35D	UC-35D	11	
Helicopter, Attack, AH-1W	AH-1W	18	
Helicopter, Cargo, CH-46E	CH-46E	44	
Helicopter, Cargo, CH-53E	CH-53E	16	
RQ-7B Shadow System	RQ-7B	6	
Communications/Electronics			
Radio Set, AN/MRC-148	A0067	8	
Radio Set, AN/MRC-142C	A0153	1	
Support Wide Area Network (SWAN) D (V1)	A0234	4	
SWAN D (V2)	A0241	4	
Satellite Communication Subsystem	A0242	4	
SWAN D Network Package	A0243	4	
Support Wide Area Network MRT	A0244	4	
Combat Operations Center, Set III - AN/TSQ-239(V)3	A0254	4	
Combat Operations Center, Set IV - AN/TSQ-239(V)4	A0255	4	
Combat Operations Center	A0271	6	
Radio Set, AN/MRC-145A	A1957	1	
General Supply			
Container, Quadruple (QUADCON)	C4433	3	
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	
Truck, RTAA, Tractor, 7-ton, W/O Winch, MK31A1	D0009	9	
Tractor, MTVR 7-ton Armored, AMK31	D0013	9	
Truck, Wrecker, MTVR 7-ton Armored, AMK36	D0015	6	
HMMWV, ECV, Enhanced, M1152	D0022	7	
HMMWV, ECV, Armament Carrier, M1151	D0030	6	
Truck, Utility: Expand Capacity, G2/GP Vehicle, M1165	D0031	6	
HMMWV, ECV, TOW Carrier, Armored, M1167A1	D0032	4	
HMMWV, ECV, Armored, M1152 (2-Door)	D0033	5	

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Average Age of Equipment

Table 2

Nomenclature	Equip No.	Average Age	Remarks
HMMWV, ECV, C2/General Purpose, M1165	D0034	6	
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	3	
Truck, Tractor, 10X10, LVSR	D0887	1	
HMMWV, Ambulance, 4 Litter, Armored, M997	D1001	11	
HMMWV, Ambulance, 2 Litter, Soft Top, M1035	D1002	11	
Truck, Cargo, MTVR 7-ton XLWB, MK27/MK28	D1062	9	
Truck, Cargo, MTVR 7-ton, MK37 w/Crane	D1063	4	
Truck, Aircraft Crash/Structure Firefighting, A/S32P-19A	D1064	25	
Truck, Dump, RTAA, 7-ton	D1073	10	
Truck, Wrecker, 10X10, LVSR MK15	D1214	1	
Ordnance & Weapons			
Launcher, Tubular F/GM(TOW), M41A1 SABER	E0055	4	
Command Launch Unit, Javelin M98A1	E0207	4	
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	6	
Launcher, Tubular F/GM (TOW), M220E4	E0935	15	
Light Armored Vehicle, Anti-Tank, LAV-AT	E0942	3	
Light Armored Vehicle, Cmnd/Control, LAV-C2	E0946	2	
Light Armored Vehicle, 25mm, LAV-25	E0947	3	
Light Armored Vehicle, Logistics, LAV-L	E0948	3	
Light Armored Vehicle, Mortar, LAV-M	E0949	3	
Light Armored Vehicle, Maint/Recovery, LAV-R	E0950	2	
Recovery Vehicle, Heavy, Full-Tracked, M88A2	E1378	8	
High Mobility Artillery Rocket System (HIMARS)	E1500	6	
Tank, Combat, Full-tracked, 120mm Gun, M1A1	E1888	17	

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Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017
Weapons and Combat Vehicles			
Assault Amphibious Vehicle (AAV7A1) Product Improvement Program (PIP)	$354,000	$358,000	$317,000
Light Armored Vehicle (LAV) PIP		1,184,000	1,091,000
155mm Lightweight Towed Howitzer	619,000	342,000	12,000
High Mobility Artillery Rocket System	3,154,000	3,246,000	2,971,000
Weapons and Combat Vehicles under $5M	816,000	201,000	65,000
Modification Kits	3,365,000	2,442,000	2,488,000
Guided Missiles and Equipment			
Javelin	286,000	153,000	167,000
Follow-on to Shoulder-Launched Multipurpose Assault Weapon (SMAW)	918,000		
Anti-Armor Weapons System-Heavy (AAWS-H)	177,000	181,000	187,000
Communications and Electronics Equipment			
Unit Operations Center	185,000	1,215,000	2,160,000
Common Aviation Command and Control System (CAC2S)		2,500,000	
Repair and Test Equipment	3,758,000	1,218,000	1,258,000
Items under $5M (Communications & Electronics)	39,000	47,000	47,000
Air Operations Command and Control (C2) System	41,000	75,000	
Radar Systems	2,552,000	5,475,000	3,980,000
Fire Support System	3,452,000	4,012,000	3,762,000
Intelligence Support Equipment		832,000	
RQ-11 Unmanned Aerial Vehicle (UAV)	411,000	412,000	413,000
Distributed Common Ground System (DCGS)-Marine Corps	473,000		1,557,000
Common Computer Resources	588,000	913,000	10,000
Command Post Systems	6,791,000	3,095,000	190,000
Radio Systems	15,682,000	12,688,000	560,000
Communications Switching & Control Systems	6,932,000	3,239,000	4,196,000

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Table 3

Service Procurement Program - Reserve (P-1R)

Nomenclature	FY 2015	FY 2016	FY 2017
Support Vehicles			
Motor Transport Modifications	469,000	1,206,000	1,037,000
Family of Tactical Trailers	1,633,000	1,217,000	1,726,000
Engineer and Other Equipment			
Environmental Control Equipment	361,000	507,000	1,036,000
Bulk Liquid Equipment	667,000	1,145,000	861,000
Tactical Fuel Systems	2,770,000	109,000	325,000
Power Equipment Assorted	1,910,000	2,244,000	3,244,000
Amphibious Support Equipment	200,000	200,000	200,000
Explosive Ordnance Disposal (EOD) Equipment			2,906,000
Material Handling Equipment	3,727,000	983,000	902,000
Container Family	821,000	727,000	367,000
Family of Construction Equipment	1,913,000	1,835,000	1,379,000
Items less than $5M (Engineer)	241,000	210,000	178,000
Total	**$65,305,000**	**$54,211,000**	**$39,592,000**

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Table 4

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014[1]
FY 2012 NGREA Equipment[2]			
Flight Training Device, UH-1	$33,000,000		
Flight Training Device, CH-53E	14,000,000		
Flight Training Device, MV-22B	10,001,000		
KC-130T Digital Engine Indicator Panels	3,928,571		
KC-130T Electronic Propeller Control System (EPCS)	2,071,428		
FY 2013 NGREA Equipment			
Flight Training Device, MV-22B		$12,000,000	
KC-130J Weapons System Trainer		28,198,000	
KC-130J Cockpit Procedures Trainer		7,078,000	
KC-130T WX Radar Replacement and GPS		12,546,784	
KC-130T Electronic Propeller Control System (EPCS)		8,567,237	
KC-130T Hose Reel Improvements		1,723,008	
KC-130T Tactical Air Navigation (TACAN) Upgrade		740,880	
F-5 Electronic Attack (EA) Digital Radio Frequency Memory (DRFM) Pods		3,993,000	
F-5N Terminal Collision Avoidance System TCAS/TAWS		3,120,000	
F-5N Helmet Mounted Cueing		2,100,004	
Covert Lighting Upgrades for C-12W		1,750,020	
UC-12W Satellite Phones		120,000	
Combat Operations Center Ver 2 Upgrades		2,567,550	
Combat Operations Center Ver 4 Upgrades		1,231,824	
Combat Operations Center Capability Set (CAPSET) Software Upgrade		638,587	
Indoor Simulated Marksmanship Trainer (ISMT) refresh of hardware systems for Reserves		12,224,300	
AN/TSQ-231A Joint Enhanced Core Communications System (JECCS)		5,400,000	
Meteorological Mobile Facility (Replacement) [METMF(R)] Weather Forecasting Module		4,000,000	
Battlefield Illumination Chutes		1,570,000	
Request Pending		10,430,806	
Total	**$63,001,000**	**$120,000,000**	

1. Service FY 2014 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2014 will be provided in next year's NGRER.

2. A decrement of $1,999,000 was applied to USMCR FY 2012 NGREA due to FY 2013 sequestration reduction allocation.

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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 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Aircraft, Refueling/Cargo, KC-130J	KC-130J	+3		+2	KC-130J begins with transfers from AC
Aircraft, Refueling/Cargo, KC-130T	KC-130T	-12			KC-130Ts being replaced with KC-130Js
Helicopter, Attack, AH-1W	AH-1W	+2			Payback from foreign military sales (FMS) in Dec 2011
Helicopter, Cargo, CH-46E	CH-46E	-8			CH-46Es being replaced with MV-22Bs
Tilt-rotor, Cargo, MV-22B	MV-22B	+4	+12		Replacing CH-46Es with MV-22B transfers from AC

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Table 6

FY 2011 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2011 Planned Transfers & Withdrawals							
Data Distribution System (DDS), AN/TSQ-228(V)2	A2534	-7	-2				
HMMWV, Cargo/Troop Carrier, M1123	D1158	-150	-160				
TOW Launcher, M220E4	E0935	-106	-41				
FY 2011 P-1R Equipment							
Weapons and Combat Vehicles							
Assault Amphib Veh (AAV7A1) Product Improvement Program (PIP)				$78,000	$78,000		
Light Armored Vehicle (LAV) PIP				7,428,000	7,428,000		
High Mobility Artillery Rocket System (HIMARS)				1,701,000	1,701,000		
Communications and Electronics Equipment							
Fire Support System				343,000	0		
Engineer and Other Equipment							
Environmental Control Equipment				4,344,000	4,344,000		
Bulk Liquid Equipment				1,294,000	1,290,000		
Tactical Fuel Systems				4,847,000	4,850,000		
Container Family				134,000	134,000		
Bridge Boats				4,312,000	4,310,000		
FY 2011 NGREA Equipment							
Light Armored Vehicle, Logistics (LAV-L) Variant						$19,150,000	$17,813,000
Combat Convoy Simulators (CCS) Projectors and HW Refurbishment						17,000,151	0
Indoor Simulated Marksmanship Trainer (ISMT) refresh systems						11,143,488	0
ISMT Rifle Combat Optic (RCO) & Adaptors						1,207,330	747,401
M1A1 Abrams Tank Suspension Upgrade Kits						6,000,000	7,789,998
RQ-11B Raven B/Procurement of DDL Systems (UAV)						5,400,000	5,400,000
RQ-11B Raven Upgrade						0	3,797,712
RQ-11B Raven B/ISPS (Spares Package)						609,570	609,570
RQ-11B Raven B/RSTA Kits (Laptop)						180,000	180,000
RQ-11B Raven B/Vampire Licenses (Training Software on RSTA Kit for simulation)						135,000	135,000
RQ-11B Raven B/SASSM GPS (3 per UAV)						135,000	135,000
Virtual Combat Convoy Trainer (VCCT) and Reconfigurable Vehicle Simulator (RVS)- Proj/HW Refurbishm						4,700,000	0
VSAT/VSAT Network Packages SWAN D						2,199,991	0
VSAT/VSAT Small SWAN D (V) 1						1,600,000	0
VSAT/VSAT Medium SWAN D (V) 2						39,474	0
Combat Vehicle Training System (CVTS), procure spare parts for AAV Turret Trainer						499,996	

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Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
M1A1-Generation IV Abrams Ammunition Rack (G4AAR)						0	17,936,550
MV-22B Flight Training Device						0	9,398,483
UC-12W Extended Range Tanks						0	2,947,096
Combat Operation Center Version 2 Upgrade						0	2,567,550
Grenade Launcher, Optic						0	542,640
Total				**$24,481,000**	**$24,135,000**	**$70,000,000**	**$70,000,000**

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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 deployable in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired equipment item.

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 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 equipment items 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 equipment data submitted by the Service.

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	KC-130J Aircraft	28	21	$74,800,000	$1,570,800,000	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 Active Component (AC) has already fielded the KC-130J. Only 7 aircraft are programmed for the Reserve Component (RC) within the FY 2014 Future Years Defense Program (FYDP).
2	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 exists 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.
3	RQ-21 Small Tactical Unmanned Aircraft System	3	3	$8,000,000	$24,000,000	RC fielding delayed due to budgetary constraints. Lack of systems creates significant capability gap between RC and AC. Unable to execute entire range of assigned mission-essential tasks (METs) without system procurement.
4	KC-130J Training Suite	2	1	$47,700,000	$47,700,000	Devices are integral to conversion training and achieving systems proficiency prior to delivery of aircraft. Shortfall requires significant increases in travel costs to use AC devices
5	Flight Training Device, AH-1Z	3	3	$16,000,000	$48,000,000	The AH-1Z Viper aircraft is scheduled for delivery to the RC during FY 2019. Devices are integral to conversion training and achieving systems proficiency prior to delivery of aircraft. Lack of simulator imposes significant increases in aircraft flight hours to maintain required MET proficiency post aircraft delivery.
6	UH-1Y Aircrew Training Systems	1	1	$16,500,000	$16,500,000	The UH-1Y Venom aircraft is scheduled for delivery to the RC during FY 2014. Devices are integral to conversion training and achieving systems proficiency prior to delivery of aircraft. Lack of simulator imposes significant increases in aircraft flight hours to maintain required MET proficiency post aircraft delivery.

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Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
7	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.

Chapter 4
United States Navy Reserve

I. Navy Overview

A. Navy Planning Guidance

All Navy Reserve plans and policies are fully aligned with the Chief of Naval Operations' (CNO's) strategic priorities. The CNO's intent to continue to operate forward with ready forces is directed and informed by the national Defense Strategic Guidance:

> Our first responsibility is to ensure Navy is able to deliver the overseas presence and capabilities required by our Defense Strategic Guidance (DSG) *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense,* as manifested in the GFMAP [Global Force Management Allocation Plan]. Our mandate per the DSG is to be present overseas where it matters, and to be ready when it matters. A central element of the DSG to Navy is to field a ready force, with the right capabilities, postured in each region. The DSG concludes that a prompt, credible response by forward U.S. forces can demonstrate American resolve and can blunt the initial actions of an aggressor. This can in turn deter, assure, and—if necessary—control escalation, contain the conflict, and prevent it from growing into a larger war. Our fundamental approach to making decisions and implementing the DSG is unchanged since I assumed the office of the Chief of Naval Operations. We organize, man, train, and equip the Navy by viewing our decisions through three lenses, or tenets. They are: *Warfighting First*, *Operate Forward*, and *Be Ready*. Regardless of the size of our budget or our fleet, these tenets are the key considerations we apply to each decision.[1]

The Navy Reserve, in turn, aligns its equipping plans and policies with CNO's tenets. Whether purchasing equipment for combat and combat support ("Warfighting First"), deployed operations ("Operate Forward"), or mobilization training ("Be Ready"), our priorities are aligned with the Total Force concept. Being aligned as one Navy allows for maximum purchasing efficiency and reduced redundancy.

The CNO's Navigation Plan 2014–2018 guides and informs both Active Component (AC) and Reserve Component (RC) budget submissions. The Navigation Plan states that "Future reductions to Navy's budget will impact our ability to maintain the overall size of our fleet, but we will ensure the force we deploy is proficient and ready."

As part of the budget process, the AC/RC force structure ratio is continuously analyzed to maintain the force size necessary to meet combatant commander requirements. As part of these calculations, Reserve forces are expected to be prepared to deploy in an operational role when called upon, and not remain in a purely strategic reserve posture.

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[1] CNO before the Senate Subcommittee on Defense Committee on Appropriations on *FY 2014 Department of the Navy Posture*, April 2013.

The CNO's Navigation Plan further states "Budget constraints will compel Navy to put a premium on readiness; Navy will continue to deploy proficient and ready forces. To reduce costs, we will explore options to adjust the readiness of non-deployed forces."

A proven, cost-effective way of reducing risk in a period of decreased AC force readiness is to maintain a ready, robust RC. By only paying for part-time, focused readiness training for Reserve forces, the cost of full-time pay and benefits is avoided. A properly trained and equipped Navy Reserve presents national leaders with operational and strategic options. It is a force that can be employed in the operational rotation, when required, while also serving as a hedge against risk in a strategic role.

B. Navy Equipping Policy

DoD Instruction 1225.06, *Equipping the Reserve Forces*, establishes policy 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, *Equipping Reserve Forces*. It states Navy Reserve units will be equipped to accomplish all assigned missions and have an equipment and distribution program that is balanced, responsive to mission requirements, and sustainable. Priorities for distribution of equipment should be given to units scheduled to be deployed and/or employed first.

The Navy has established a seamless and fully integrated Total Force. The RC is a force multiplier 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 Navy, senior leadership identifies RC requirements and priorities 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 deployed operations and is ready to surge forward in response to a request for forces from the Navy.

C. Plan to Fill Mobilization Shortages in the RC

The Navy's Total Force is an operational and organizational reality. Operational Navy missions are executed by the AC and its equipment, the RC and its equipment, or a combination of both. AC and RC Sailors also provide strategic depth for a variety of 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 some 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 initiatives to modernize, improve, or change operational capabilities of the RC.

- Littoral Combat Ship (LCS): An important Navy RC mission is to maintain assigned Selected Reserve (SELRES) personnel and equipment in an optimized state of readiness and availability to support LCS mission requirements. The Navy has already made an impressive commitment to this strategic initiative through the establishment of 13 units and 400 billets dedicated to LCS operations and support, with a goal of 1,000 personnel in 20 units by FY 2019. RC LCS units are organized to provide strategic support for warfighting requirements as well as operational support during normal and surge operations for the LCS squadron staffs, seaframe core crews, and Mission Module crews.

- C-40A Clipper: The C-40A is the Navy's designated C-9B/C-20G replacement aircraft. Fifteen of the 17 aircraft required to meet the Navy's "risk adjusted" inventory objective/red-line requirement have been procured. This allowed the Navy to divest of the C-9B in 2014. The procurement of the remaining two aircraft will enable the Navy to retire the C-20G airframe and meet wartime air logistics obligations. Aircraft are funded through a combination of National Guard and Reserve Equipment Appropriation (NGREA), Congressional adds, and the President’s Budget request for DoD procurement funding depicted 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
2013	1	Congressional add

- RC support to unmanned aircraft system (UAS) program: The Navy is currently developing cost-effective, RC-integrated manpower and equipment solutions to meet requirements

challenges faced by its newest generation of 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. 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 Navy Reserve and SELRES concentration areas. Fire Scout emergent mission requirements also lend themselves especially well to the unique advantages of the RC Sailor. As the Navy's requirement for the Fire Scout system increases, Navy Reservists would be an ideal fit to augment AC Fleet Replacement Squadron (FRS) instructors as well as provide a surge capability to backfill the fleet. At the same time, significant cost-savings can be achieved during periods of lower utilization.

- F/A-18A+ Hornet upgrades: The Tactical Support Wing (TSW) operates 20 F/A-18A+ Hornet aircraft, divided between two squadrons that provide over 25 percent of the Navy's advanced adversary support requirements. These squadrons provide adversary support with aging aircraft that are capable of simulating most Generation 3 and some Generation 4 threat aircraft. As Naval Aviation prepares for the threat posed by predominantly Generation 4 and 5 aircraft operated by many potential adversaries, Navy Reserve Hornets must be replaced or significantly upgraded to provide this vital training. In addition to training fleet naval aviators, these two squadrons are tasked to provide a critical strategic reserve capability by standing ready to augment deployed AC carrier air wings. Due to the aging airframes and parts non-commonality with F/A-18C and E/F models, these two squadrons must be recapitalized with F/A-18C, F/A-18E, or F-35C aircraft to provide required adversary support and operational relevancy in a deployed role.

- F-5 Tiger II sustainment/upgrades: TSW also operates 32 F-5 Tiger II aircraft, apportioned between two squadrons. These squadrons execute 50 percent of the Navy's total adversary support missions at considerably lower cost than other platforms. While this approach is more economical, it limits fleet readiness as these aircraft simulate Generation 3 fighter aircraft threats from the 1970s and early 1980s. They are unable to simulate many more recent threat capabilities, such as beyond-visual-range missiles, modern radars, and radar warning receivers. Mitigating these hardware limitations is the fact that they are primarily used to train FRS pilots in the basic flight maneuvering of air-to-air combat, and that they are flown by many of the Navy's most experienced fighter pilots. The modernization of the F-5 fleet remains critically important, however, since the economical F-5 fleet is expected to be in use through at least 2025 and is also used in the later stages of air-to-air training in conjunction with more advanced adversary aircraft. A small investment in the F-5's capability will provide substantial training and readiness dividends for years to come.

- EA-18G Growler: 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 retired in 2013, coincident with the planned expiration of combatant commander expeditionary airborne electronic attack (AEA) requirements. However, recent mandates require an extension of the expeditionary AEA mission and directed transition of four EA-6B squadrons to the EA-18G platform by Dec 2014. This transition included the Navy Reserve's single

EA-6B Prowler squadron and serves as the baseline for the Reserve EA-18G recapitalization plan.

- P-3 to P-8 transition: Maritime Patrol and Reconnaissance P-3C aircraft continue to be affected by continuing structural fatigue across the inventory. Due to a fleet-wide shortage of 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 in FY 2019. Retaining the skills and experience of transitioning maritime patrol reconnaissance personnel is a strategic imperative for the Navy to provide surge capacity in support of major combat operations. Both RC patrol squadrons (VP) must be recapitalized with the P-8A aircraft.

- C-130T: The Navy Reserve is in the process of acquiring excess Marine Corps Reserve C-130 aircraft to fulfill its inventory requirement and reduce aircraft utilization rates to extend the useful life of the current inventory. C-130T aircraft are an essential part of Navy-unique fleet-essential airlift (NUFEA) requirements. They serve as the key connector between strategic airlift points of departure and the carrier-onboard-delivery and vertical-onboard-delivery access points to the fleet. The C-130T also specializes in worldwide outsized cargo NUFEA airlift.

- Navy Expeditionary Combat Command (NECC): Baseline, Overseas Contingency Operations (OCO), and NGREA funding continue to fill critical equipment gaps in the modernization and recapitalization of the Naval Construction Force, Navy Expeditionary Logistics Support Group (NAVELSG), and Coastal Riverine Force (CRF). NECC RC units require $245M 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 Total Force 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 fleet. The Navy must have interoperability between all elements of the Total Force to ensure an effective and capable team. Eliminating capability gaps between the RC and AC through equipment acquisition and upgrade programs will continue to remain a top priority for the Navy Reserve.

The Navy reduced 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 uncertainty 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, and F/A-18E)
- Expeditionary equipment procurement (Coastal Riverine Force [CRF], Naval Construction Force [NCF], and Navy Expeditionary Logistics Support Group [NAVELSG])

In January 2010, the CNO, the Chief of Naval Personnel, and the Chief of Navy Reserve (CNR) signed the *Navy Total Force Vision for the 21st Century (NTF 21)*. This document clearly articulates the 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 has never been more ready, relevant, or aligned with the Navy's Active component than we are today. Currently, over 4,000 dedicated Reserve Sailors are mobilized around the globe in support of overseas contingency operations."[2]

The Navy Reserve is fully engaged across the full spectrum of Navy, Marine Corps, and joint force operations, from peace to war. In 2013, a majority of Sailors who served as individual augmentees were sourced from the RC, to allow AC Sailors to fill critical billets at sea. In addition, mobilized or deployed Navy Reserve Sailors are providing approximately half of the Navy's ground forces serving in the United States Central Command (USCENTCOM) area of responsibility (AOR) and in other critical roles worldwide. Reserve expeditionary Sailors deploy alongside their AC counterparts as complete units and individual augmentees.

Mobilizations are but one form of duty performed by Navy Reserve Sailors. While executing mobilizations in FY 2013, the Navy Reserve continues to bring valued capabilities for urgent requirements and ongoing operational support.

> An example that epitomizes the strength and flexibility of the Navy Reserve and demonstrates our unique ability to "be ready" to serve the Nation and complement the Navy Total Force is the Reserve Component's response to Super Storm Sandy. Within hours of the storm's landfall, 26 RC Navy Emergency Preparedness Liaison Officers (NEPLOs) were deployed to federal, state, and local government agencies throughout the Northeast. NEPLOs provide support to Regional Operations Centers and various Maritime Operations Centers across the country during natural and man-made disasters, certain Presidential events, and regional emergency preparedness exercises. NEPLOs were embedded in all the affected states and Navy Regions affected by Sandy. They coordinated efforts to provide support to the Federal Emergency Management Agency, which requested assets and capabilities resident only in the military. As soon as the storm abated, RC aircrew from HM-14 flew four MH-53 helicopters from *USS Wasp* to ferry first responders, vital equipment, and supplies to areas inaccessible by vehicle. In another

[2] CNR before the Senate Subcommittee on Defense Committee on Appropriations, *FY 2014 Department of the Navy Posture*, April 2013.

> mission, Navy Reserve C-9Bs were called to move 110 Seabees and 6,600 lbs. of cargo from Port Hueneme, CA to McGuire Air Force Base on short notice. A separate C-9B crew transported a P-3 Mobile Operations Control Center from San Diego, CA to Naval Air Station Jacksonville in support of U.S. Fleet Forces Command efforts to survey coastal damage. Navy Reserve Chaplains assigned to the USCG [United States Coast Guard] also participated in the USCG's response to Sandy. The NEPLO mission is exclusive to the Navy Reserve Component and these flexible and responsive operations exemplified our Navy Reserve motto: "Ready now. Anytime, Anywhere."[3]

Every day, Navy Reserve Sailors provide important operational support to the Navy. Approximately one-quarter of these Sailors are 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 both 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 training command; 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. Furthermore, in the case of SELRES Sailors, when their work is done, they return to their civilian careers and leave the Navy payroll. Navy Reserve Sailors are both a highly-skilled and cost-effective workforce.

NGREA is 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 enabled critical RC equipment recapitalization affecting Aviation, Surface, and deploying expeditionary Sailors.

a. Fleet Air Logistics

The RC provides 100 percent of the Navy's organic, global airlift capability for fleet and combatant commands (COCOMs). The Fleet Logistics Support Wing (FLSW) consists of 12 squadrons operating C-40A, C-9B, C-20A/D/G, C-37A/B, and C-130T aircraft. C-9B aircraft average 35 years in age and require substantial avionics upgrades and engine replacement to meet globally-mandated noise-abatement and navigation requirements. Significant airlift recapitalization was initiated in FY 1997 when $120M of NGREA funding was provided to procure the first two C-40A aircraft, beginning the replacement of the C-9B fleet. Thirteen more C-40As were procured between FY 1998 and FY 2013, 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, Virginia), VR-57 (NAS North Island, California), VR-58 (NAS Jacksonville, Florida), and VR-59 (NAS Joint Reserve Base [JRB], Fort Worth, Texas).

[3] Ibid.

VR-61 (NAS Whidbey Island, Washington), the last C-9B squadron, is scheduled to transition to the C-40A in FY 2015.

FLSW C-130T squadrons are eagerly anticipating the transfer of five KC-130T aircraft from the Marine Corps Reserve during their transition to the KC-130J. The current FLSW C-130T fleet, and potential additions, are compliant past 2014 with Communication, Navigation, Surveillance (CNS)/Air Traffic Management (ATM) requirements. However, the aircraft are limited to certain flight altitudes due to the lack of a certified Global Positioning System (GPS) and enhanced altitude reporting capability, and continue to face financial shortages that threaten future compliance. Completing an Avionics Obsolescence Upgrade (AOU) on the current Navy C-130 fleet will be required to modernize flight instruments. The AOU modification provides full compliance with CNS/ATM and safety mandates through an integrated open architecture avionics system. Additionally, it replaces several aging avionics systems that are becoming obsolete and degrading aircraft readiness. Because of its versatile capability, the C-130T remains the most requested airlift asset in the Navy Reserve. 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 TSW provides a strategic reserve for the Navy's 10 carrier air wings, and also provides adversary training and homeland defense operations. The TSW is comprised of five squadrons: one E/A-18G, two F/A-18A+, and two F-5 F/N.

The EA-18G squadron, VAQ-209, flew the EA-6B until FY 2013, supporting joint airborne electronic warfare requirements in Afghanistan while supplementing Fleet Replacement Squadron aircrew training requirements at home. The Navy is currently recapitalizing the RC E/A-6B Prowlers with five E/A-18G aircraft in conjunction with relocating the squadron from Joint Base Andrews, Maryland to NAS Whidbey Island, WA to provide additional operational, logistic, and fiscal benefits through collocation with the Navy's Electronic Attack community. The squadron will be designated "Safe for Flight" in early 2014 and "Ready for Tasking" in 2015. The transition is needed to mitigate the Navy's AEA capacity and capability gap in the future. Without the RC E/A-18G transition, the Navy will lose a critical operational and strategic reserve AEA capability. 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 F/A-18A+ RC Hornet squadrons with F/A-18E and F-35C Joint Strike Fighter (JSF) aircraft. 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-18A+ aircraft, which comprise more than 25 percent of the Navy's total 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 usable maritime patrol aircraft providing antisubmarine warfare (ASW) surge capacity, counter-illicit trafficking operations, humanitarian assistance/disaster relief support, increased homeland defense contingency options, and fleet and NATO exercise support. The RC operates 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 and is capable of intelligence, surveillance, and reconnaissance collection. The BMUP variant augments an AC P-3 inventory shortfall in 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 full operational capability to be achieved in FY 2019. In response to a Global Force Management reduction associated with the AC P-8A transition, the RC is providing 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 full operational capability of the P-8A's LSRS-replacement system. The Navy is currently exploring plans to replace the 12 RC P-3Cs with seven P-8As. The recapitalization of both RC VP patrol 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 five helicopter squadrons to the Navy's rotary-wing fleet that are operationally integrated into the AC wings for routine tasking and surge support. The squadrons perform a variety of critical missions, including dedicated rotary-wing special operations forces (SOF) support, search and rescue, logistics support, ASW, airborne mine countermeasures (AMCM), and counter-illicit trafficking operations. HSC-84 and HSC-85 operate the HH-60H, and provide the Navy's only dedicated Naval Special Warfare support. HSL-60 provides dedicated fleet support and the only Navy night airborne use of force capability for counter-drug operations. HSL-60 will begin its transition from the SH-60B to the MH-60R during FY 2015. Additionally, the RC is responsible for personnel and equipment (seven MH-53E helicopters) in support of two composite AC/RC AMCM squadrons (HM-14 and HM-15), which comprise 37 percent of the Navy's total AMCM capability.

Personnel from HSC-84 (NAS Norfolk, Virginia) 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 USCENTCOM AOR.

HSC-85 (NAS North Island, California) has participated in several overseas SOF training detachments and is deploying to Guam in support of a United States Special Operations Command request for forces. Both squadrons provide over 25 percent of the helicopter support to special operations, making them vital to the success of the Nation's SOF. HSL-60 (Naval Station Mayport, Florida) is tasked with fleet support and counter-illicit trafficking operations, deploying six-months per year in the United States Southern Command (USSOUTHCOM) AOR. Additionally, this squadron provided the first Navy Reserve air 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 FY 2013, mergers of the Riverine Force and the Maritime Expeditionary Security Force to form the CRF were completed for all squadrons. The combined force is organized into three AC squadrons of four companies each and four RC squadrons of three companies each. The scalable CRF units protect critical maritime infrastructure, embark in military and strategic sealift vessels, and escort fleet units operating in and around foreign ports worldwide. The CRF is composed of 5,093 personnel, of which 2,608 are RC.

The most critical needs for Navy Reserve CRF continue to be acquisition of MK VI Patrol Boats and Riverine Command Boats for each squadron. Additional funding is also required for the Mobile Ashore Support Terminal (MAST), Radar Sonar Surveillance Center (RSSC), and electrical generators. CRF has a projected total shortfall of $200.6M across the FYDP.

f. Naval Construction Force (NCF)

NCF provides a wide range of construction capability in support of Navy and Joint Forces including building roads, bridges, airfields, operations bases, and civic projects for partner nations.

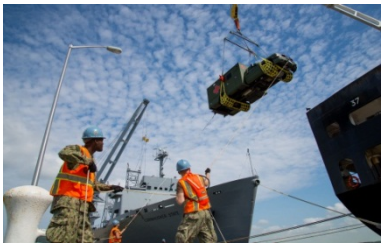
As a result of force structure reductions to be completed by FY 2015, the Navy Reserve component of NCF will consist of three Naval Construction Regiments and six Naval Mobile Construction Battalions. The resulting force maintains capacity for contingencies and operational-plan requirements worldwide as well as preserving critical peacetime and wartime construction skills. By 2015, the NCF will consist of 11,526 personnel, including 5,875 Reserve Sailors.

g. Navy Expeditionary Logistics Support Group (NAVELSG)

NAVELSG delivers worldwide expeditionary logistics and is manned with AC and RC personnel. Missions include port and air terminal cargo handling, fuels distribution, ordnance reporting and handling, and customs and postal operations.

NGREA recently funded a full-size training crane system at Cheatham Annex, Virginia, enabling 3,000 Navy Reservists to achieve mission readiness in a risk-free environment. To add the same

level of training capability for NAVELSG air cargo company Sailors, an aircraft loading simulator for C-5 and C-17 platforms is planned.



NAVELSG is 90 percent manned by Reserve Sailors, comprising one AC and six RC Navy Cargo Handling Battalions. The total force is 3,046 personnel, of which 2,754 are Navy Reserve Sailors.

NAVELSG's consolidated Table of Allowance (TOA) requires additional construction equipment, tactical vehicles and shipping containers, totaling $24.7M across the FYDP.

h. Expeditionary Combat Camera (EXPCOMBATCAM) Atlantic

EXPCOMBATCAM provides video and still documentation teams for combat operations, joint exercises, and contingency operations throughout the joint force. EXPCOMBATCAM is a Navy Reserve visual information acquisition unit providing aerial and surface visual documentation and includes the only Navy subsurface documentation capability.

i. Navy Expeditionary Intelligence Command (NEIC)

NEIC delivers maritime expeditionary intelligence experts that respond to rapidly evolving irregular warfare requirements. Functional area capabilities provided by NEIC include tactical ground/maritime human intelligence, intelligence exploitation, expeditionary intelligence analysis, and tactical electronic warfare/information operations. With unique access to areas normally inaccessible to more traditional intelligence assets, NEIC gives expeditionary forces and joint forces timely, actionable intelligence not otherwise available. NEIC is comprised of 258 personnel, of which 77 are Reserve.

j. Surface Warfare Enterprise

The Surface Warfare Enterprise is supported by more than 2,000 surface Navy Reserve billets across 86 RC units and detachments. The RC personnel in these billets support the following major surface and amphibious warfare areas: LCS, Ballistic Missile Defense, surface readiness detachments, naval beach group, assault craft units, beachmaster units, amphibious construction battalions, Tactical Air Control, and Afloat Culture Workshops. Additionally, RC Sailors provide critical operational support to surface deployments in the USCENTCOM, United States Africa Command, USSOUTHCOM, and United States Pacific Command AORs.

The LCS is designed to provide warfighting capabilities and operational flexibility that contribute to maritime dominance and provide improved access for the joint force. LCS employs manned and unmanned vehicles and other systems to accomplish the primary missions of littoral

antisubmarine warfare, mine countermeasures, and surface warfare. The Navy Reserve LCS mission is to maintain assigned SELRES personnel and equipment in an optimized state of readiness and availability to support LCS mission requirements. Navy has already made an impressive commitment to this strategic initiative through the establishment of 13 units and 400 billets dedicated to LCS operations and support, with a goal of 1,000 personnel in 20 units by FY 2019. RC LCS units are organized to provide strategic support for warfighting requirements as well as operational support during normal and surge operations. It is anticipated that the 20 LCS units will provide 30,000 man-days of support per year, augmenting manpower for the LCS squadron staffs, seaframe maintenance, shipboard antiterrorism/force protection watches and Mission Module support. Maintenance is the chief focus area of the RC effort, constituting approximately 60 percent of the overall RC contribution to the LCS Program.

In support of the beach group mission, Navy Reserve owns and operates ten Maritime Prepositioning Force Utility Boats (MPFUBs) 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.

k. Naval Special Warfare (NSW)

Naval Special Warfare Group Eleven (NSWG-11) is the immediate superior in command for two Reserve sea-air-land (SEAL) teams, with 15 RC operational support units and 15 regional NSW detachments, comprising 1,007 AC and RC billets. In addition to its role as NSW RC force commander, NSWG-11 functions as the Operational Support Office for the NSW RC force. At any given time, one-third of NSW RC personnel are providing seamlessly integrated operational support to NSW and joint SOF units around the world.

The NSW RC is a highly flexible force that provides key strategic capability to the NSW total force. In addition, Reserve SEAL, special warfare combatant-craft crewmen (SWCC), and combat support personnel have continued to fulfill NSW AC operational requirements at an extraordinarily high operational tempo. Nearly every RC SEAL and SWCC has been mobilized, and the majority of NSW RC personnel volunteer for additional active duty during their dwell time.

The globalization of the special operations enterprise has seen increased demands on NSW RC personnel and equipment as forces are employed worldwide. Additionally, mission sets traditionally residing within the AC (e.g., counter narcotics, interagency operations) are increasingly being sourced to NSW Reserve units, freeing AC units to meet increasing demand for SOF while taking advantage of the unique civilian and military skill sets within NSW RC.

Since the NSW RC force became operational in FY 2008, it has relied heavily on NSW AC units to provide equipment for both training and deployment. This results in shortages in equipment for training and employment. There continues to be increasing demand placed upon the NSW RC, leading to manning, training, and equipping challenges. NGREA funding has been effective in

mitigating critical shortages in NSW RC equipment requirements, purchasing key items such as body armor, weapons, and visual augmentation systems.

l. Military Sealift Command (MSC)

MSC is the transportation provider for the Department of Defense with the responsibility of providing worldwide strategic sealift and ocean transportation for all military forces. MSC is represented by five geographic area commands (Atlantic, Pacific, Europe, Middle East, and Far East), which exercise tactical control of all assigned United States Transportation Command forces and MSC forces not otherwise assigned to the numbered fleet commanders.

Nearly 900 Reserve Sailors are assigned to 40 MSC units worldwide. When mobilized, they take charge of establishing MSC port offices to assist with sealift operations where and when needed. Navy Reserve cargo afloat rig teams, or CARTs, are utilized to augment civil service mariners aboard combat logistics force ships, which transfer food, fuel, ammunition, and other critical supplies to combatant ships at sea. CARTs are composed of Reserve Sailors highly trained in underway replenishment operations for both connected and vertical replenishments.

The most critical need for MSC Reservists is joint task force expeditionary port opening equipment, which has a shortfall of $3.1M.

m. Submarine Force (Undersea Warfare)

The Navy Reserve submarine force is supported by more than 2,000 Reserve billets across numerous units and detachments. The Submarine Force Reserve Component mission is to provide trained, ready, and cost-effective personnel to the submarine force in carrying out the maritime strategy.

The mission of strategic deterrence by ballistic missile submarines is supported by RC personnel contributions to the Trident Refit Facility and Naval Submarine Support Units across the fleet. Reservists also provide critical operational support to the guided-missile submarine (SSGN) fleet with on-site support for SSGN voyage repairs conducted in Diego Garcia and Guam. Additionally, Reserve Sailors are assigned to four submarine force protection detachments, providing direct in-port support of deployed submarines around the world.

n. Space and Naval Warfare Systems Command (SPAWAR)

As the Navy’s Information Dominance systems command, SPAWAR develops, delivers, and sustains communications and information capabilities for warfighters, keeping them connected around the world, on land, at sea, and in flight. With a space support activity, two system centers, and through partnerships with three program executive offices, SPAWAR provides the hardware and software needed to execute Navy missions. SPAWAR is at the forefront of research, engineering, and acquisition to provide and sustain fleet capabilities.

o. Bureau of Medicine and Surgery (BUMED)

RC Navy Expeditionary Medical Training Institute provides tiered readiness training for Expeditionary Medical Facility (EMF) platforms and Marine Forces Reserve to support level 1 and level 2 dental care in operational and exercise environments. BUMED has identified a need to maintain four RC EMF operational platforms. Each of these platforms requires ongoing

training to maintain currency and qualifications for deployment. Dental equipment, x-ray and ultrasound systems, and various other items are required with a shortage of $680K across the FYDP.

p. Navy Reserve Public Affairs Officers

Public affairs officers and mass communication specialists support the Chief of Navy Information (CHINFO) in execution of Department of the Navy (DON) public affairs. The CHINFO/DON public affairs mission is to provide strategic counsel, contribute to operational planning, and execute communication activities in support of national objectives, joint combat operations, and the Navy missions. The Navy Reserve public affairs cadre consists of 240 officers and 270 enlisted who support Navy, joint, and expeditionary command mobilization requirements worldwide. Deployable media kits are required to maximize capability and standardize equipment within the public affairs community at a cost of $1.4M across the FYDP.

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 Equipment Items

The Navy Reserve maintains and operates equipment requiring replacement and modernization. *Table 2* provides the average age of major equipment. Of particular concern are P-3C aircraft (29 years old). These aircraft all operate at a significantly higher cost, produce lower ready-for-tasking 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 Reserve's top priorities. Procurement and upgrade programs, as well as Congressional adds, have improved RC equipment capability and compatibility. For the NCF, NAVELSG, and especially CRF units, the ability to fully fund equipment requirements remains a challenge. Since 2003, significant funding increases from Congressional adds and NGREA have helped these units reduce shortfalls.

d. Maintenance Issues

Navy Reserve equipment maintenance is a top priority. Without properly maintained equipment, RC hardware units are unable to train and deploy mission-ready Reservists. 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 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 increased levels of operation and maintenance funding. Additionally, due to sequestration, depot level maintenance on a small number of airframes, engines, and modules was deferred from FY 2014 to FY 2015, with a potential impact on FY 2015 mission readiness. Modernized replacement assets will reduce maintenance issues and produce significant program cost-savings.

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 Navy Reserve are provided in *Table 8*.

B. Changes since the Last NGRER

A recent Navy cost-savings initiative eliminated all funding for the only Navy Reserve E-2C squadron. As a result, VAW-77, located at NAS New Orleans, Louisiana, divested its respective aircraft, ceased operations, and disestablished in March 2013. The disestablishment of this squadron resulted in a decrease of approximately 1,800 flight hours and 180 days of airborne surveillance in support of counter-illicit trafficking operations.

C. Future Years Program (FY 2015–FY 2017)

1. FY 2017 Equipment Requirements

Table 1 provides projected FY 2015–FY 2017 major equipment inventories and requirements.

2. Anticipated New Equipment Procurements

Since FY 2011, significant funding has been provided to NECC units reducing RC TOA shortfalls while increasing materiel and operational readiness. *Tables 3* and *4* reflect these anticipated new equipment procurements.

3. Anticipated Withdrawals and Transfers from AC to RC

Table 5 provides major RC equipment to be decommissioned and anticipated major equipment transfers between the AC and RC.

4. Remaining Equipment Shortages and Modernization Shortfalls at the End of FY 2017

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

D. Summary

In summary, the Navy continues to integrate its Reserve and Active Components into a cohesive Total Force ready to meet all operational requirements. The Navy Reserve's top equipment priorities are aircraft and expeditionary hardware for Costal Riverine Force, Naval Construction Force, and Navy Expeditionary Logistics Support Group units. Even after significant Reserve reductions in FY 2013, Reserve personnel still comprise almost 50 percent of the Navy's expeditionary forces.

Procurement of modern equipment across all communities is essential to ensuring compatibility and interoperability with the AC. Additionally, as the Navy continues to develop UAS programs such as 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 continue to play a vital role in Navy's Total Force that will deliver valued 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 vital strategic depth and operational capabilities to the Navy and Nation. Depending on the mission, the RC mirrors or complements the AC. When required, the RC stands ready to provide rotational forces for common missions that are periodic and predictable. The RC also complements the AC by providing unique capabilities in other areas, such as intra-theater airlift, adversary support, cargo afloat rig teams, and rotary-wing support to joint special operations forces. Whether providing strategic depth or unique operational capabilities, NGREA has been essential to allowing the Navy Reserve to meet its warfighting commitments.

USNR

Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Aircraft							
Aircraft, Transport, C-40A (Boeing 737-700)	C-40A	$72,500,000	14	14	14	14	17
Aircraft, Transport, C-130T (Hercules)	C-130T	$28,343,475	19	19	19	19	20
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-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	30
Helicopter, Combat SAR, HH-60H (Seahawk)	HH-60H	$15,564,330	24	24	24	24	24
Helicopter, Mine Warfare, 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	0	0	0
Helicopter, ASW, MH-60R (Seahawk)	MH-60R	$25,000,000	0	0	7	7	7
Aviation Simulators							
C-130T Simulator	C-130T SIM	$17,735,417	4	4	4	4	4
F-5 Simulator	2F213	$3,800,000	2	2	2	2	2
FA-18C Simulator	2F193A	$8,500,000	2	2	2	2	2
Ships							
Frigate, Guided Missile (Perry Class) Flight III	FFG	$353,149,245	8	3	3	1	1
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
Reserve 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	4	2	2	2	2
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

USNR

Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
NCF Training Allowance TOA	P47	$46,703,859	1	1	1	1	1
EXPCOMBATCAM TOA Equipment	EO9	$2,800,000	1	1	1	1	1
Coastal Riverine Force (CRF)							
Squadron Headquarters & A/B/C Companies TOA Equipment	B01SQDHQ B01AA011 B01AB011 B01AC011	$63,356,760	4	4	4	4	4
Mobile Ashore Support Terminal	B01S02 MAST	$3,106,533	4	4	4	4	4
Radar Sonar Surveillance Central	B01S02 RSS1	$2,848,481	8	8	8	8	8
Navy Expeditionary Logistics Support Group							
Navy Expeditionary Logistics Regiment Staff TOA	F01NL RSTF	$1,241,266	2	2	2	2	2
Expeditionary Communications Detachment TOA	F01ECD	$1,072,163	3	3	3	3	3
Navy Cargo Handling Battalion TOA	F01NCHB	$32,720,818	3	3	3	3	3
Navy Expeditionary Intelligence Command (NEIC)							
Intelligence Exploitation Team TOA Equipment	G11IET	$1,044,181	8	6	6	6	6
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

USNR

Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Equip No.	Average Age	Remarks
Aircraft			
Aircraft, Transport, C-40A (Boeing 737-700)	C-40A	8	
Aircraft, Transport, C-130T (Hercules)	C-130T	19	
Aircraft, Transport, C-20A (Gulfstream)	C-20A	30	
Aircraft, Transport, C-20D (Gulfstream)	C-20D	26	
Aircraft, Transport, C-20G (Gulfstream)	C-20G	21	
Aircraft, Transport, C-37A (Gulfstream)	C-37A	11	
Aircraft, Transport, C-37B (Gulfstream)	C-37B	7	
Aircraft, Patrol, P-3C (Orion)	P-3C	29	
Aircraft, Fighter/Attack, F/A-18A+ (Hornet)	F/A-18A+	27	
Aircraft, Fighter, F-5 (Freedom Fighter)	F-5F/N	34	
Helicopter, Combat SAR, HH-60H (Seahawk)	HH-60H	21	
Helicopter, Mine Warfare, MH-53E (Sea Dragon)	MH-53E	20	
Helicopter, ASW, Frigate, SH-60B (Seahawk)	SH-60B	28	
Aviation Simulators			
C-130T Simulator	C-130T SIM	28	Average age of all four simulators
F-5 Simulator	2F213	5	Average age of two simulators
FA-18C Simulator	2F193A	5	Average age of two simulators
Ships			
Frigate, Guided Missile (Perry Class) Flight III	FFG	30	
Naval Beach Group			
Maritime Prepositioning Force Utility Boat	MPF-UB	4	
Naval Construction Force (NCF)			
Construction Battalion Maintenance Unit TOA	P05	15	Average age of major equipment in TOA
Naval Mobile Construction Battalion (NMCB) TOA	P25	9	Average age of major equipment in TOA
Naval Construction Regiment (NCR) TOA	P29	7	Average age of major equipment in TOA
Construction Capability Augment TOA	P32	13	Average age of major equipment in TOA
NCF Training Allowance TOA	P47	7	Average age of major equipment in TOA
EXPCOMBATCAM TOA Equipment	EO9	3	Average age of major equipment in TOA
Coastal Riverine Force (CRF)			
Squadron Headquarters & A/B/C Companies TOA Equipment	B01SQDHQ B01AA011 B01AB011 B01AC011	7	Average age of major equipment in TOA
Mobile Ashore Support Terminal	B01S02MAST	8	
Radar Sonar Surveillance Central	B01S02RSS1	8	
Navy Expeditionary Logistics Support Group			
Navy Expeditionary Logistics Regiment Staff TOA	F01NLRSTF	5	Average age of major equipment in TOA
Expeditionary Communications Detachment TOA	F01ECD	3	Average age of major equipment in TOA
Navy Cargo Handling Battalion TOA	F01NCHB	5	Average age of major equipment in TOA
Navy Expeditionary Intelligence Command (NEIC)			
Intelligence Exploitation Team TOA Equipment	G11IET	3	Average age of major equipment in TOA

USNR

Table 3

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017
Other Aircraft			
KC-130J	$92,290,000	$121,313,000	$152,022,000
Modification of Aircraft			
Adversary Aircraft	8,418,000	5,880,000	1,479,000
H-53 Series	20,643,000	18,171,000	14,841,000
C-130 Series	18,781,000	22,473,000	21,180,000
Cargo/Transport Aircraft (A/C) Series	4,635,000	13,379,000	12,574,000
Other Procurement			
Standard Boats	1,128,000	1,143,000	1,164,000
Passenger Carrying Vehicles	202,000	165,000	163,000
Construction & Maintenance Equipment		326,000	332,000
Tactical Vehicles			4,415,000
Items Under $5M - Civil Engineering Support Equipment	739,000	1,087,000	1,557,000
Materials Handling Equipment	11,000		1,279,000
C4ISR Equipment	1,850,000	1,885,000	1,929,000
Physical Security Equipment	724,000	1,804,000	4,010,000
Total	**$149,421,000**	**$187,626,000**	**$216,945,000**

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014[1]
FY 2012 NGREA Equipment			
C-40A Aircraft	$72,500,000		
Naval Special Warfare (NSW) Weapons	1,728,000		
NSW Mission Tasking Communication Equipment	772,000		
FY 2013 NGREA Equipment			
Coastal Riverine Force (CRF) MK VI Patrol Boat		$30,000,000	
F-5 Terrain Avoidance Warning System (TAWS)/Traffic Collision Avoidance System (TCAS) Initiative		9,685,000	
Naval Special Warfare (NSW) Small Unmanned Aerial Vehicle (UAV) PUMA systems		6,084,000	
F-5 Sustainment		5,460,000	
F/A-18A+ Joint Helmet-mounted Cueing System (JHMCS)		4,900,000	
Naval Special Warfare (NSW) Small Combatant Craft (11-meter Rigid-hull Inflatable Boat [RHIB])		4,018,020	
Joint Task Force-Port Opening (JTF-PO) Surface Port of Debarkation (SPOD) Expeditionary Port Unit (EPU) Table of Allowance (TOA) Equipment		3,138,412	
NSW Specialized Weapons		2,720,500	
C-40A Winglets		1,580,000	
Submarine Force Protection Detachment Standard Mission Equipment		616,000	
C-130T Annunciator Light Panel Spacer		300,000	
Network Fly Away Team Support Package (NFATSP)		364,480	
Public Affairs Deployable Multimedia Kit		192,790	
Request Pending		20,940,798	
Total	**$75,000,000**	**$90,000,000**	

1. Service FY 2014 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2014 will be provided in next year's NGRER.

USNR
Projected Equipment Transfer/Withdrawal Quantities

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

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Helicopter, ASW, Frigate, SH-60B (Seahawk)	SH-60B		-6		Replacing SH-60Bs with MH-60Rs
Helicopter, ASW, MH-60R (Seahawk)	MH-60R		+7		Replacing SH-60Bs with MH-60Rs
Frigate, Guided Missile (Perry Class) Flight III	FFG	-5		-2	Fleet continues decommissioning FFGs
Naval Mobile Construction Battalion PGI TOA	P25PGIRC	-2			With the planned decommissioning of Naval Mobile Construction Battalions, two Reserve P25PGIRC TOAs will be eliminated.
Naval Construction Regiment TOA	P29	-2			Planned reduction of Naval Construction Regiments, two TOAs will be eliminated.
Intelligence Exploitation Team TOA Equipment	G11IET	-2			Planned reduction of Intelligence Exploitation Teams reduces TOA requirements by two

USNR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2011 Planned Transfers & Withdrawals							
Helicopter, Combat, MH-60S	MH-60S	-5	-5				
Helicopter, Combat SAR, HH-60H	HH-60H	+1	+7				
Frigate, Guided Missile (Perry Class) Flight III	FFG	-1	-1				
Landing Craft, Mechanized, Mark 8	LCM-8	-4	-4				
FY 2011 P-1R Equipment							
Aircraft							
C-40A				$0	$72,936,000		
Modification of Aircraft							
H-53 Series				7,407,000	7,365,000		
Cargo/Transport A/C Series				16,092,000	14,028,000		
Other Procurement							
Standard Boats				30,777,000	21,154,000		
Passenger Carrying Vehicles				558,000	200,000		
Construction & Maintenance Equipment				436,000	545,000		
Tactical Vehicles				11,479,000	10,000,000		
Items Under $5M (Civil Engineering Support Equipment)				1,439,000	1,430,000		
Materials Handling Equipment				1,159,000	1,360,000		
C4ISR Equipment				2,358,000	2,345,000		
Physical Security Equipment				2,111,000	2,100,000		
FY 2011 NGREA Equipment[1]							
C-130T Electronic Propeller Control System						$15,600,000	$15,600,000
NAVELSG Cargo Handling Battalion Tactical Vehicles, Construction Equipment, and TOA Equipment						9,517,500	9,517,500
Adversary Digital Radio Frequency Memory (DRFM) Electronic Attack (EA) Pods						7,596,000	7,596,000
F-5 Radar Altimeter (RADALT), F-5 TAWS/TCAS						7,568,000	800,000
C4ISR Equipment						5,000,000	4,762,245
F/A-18 Helmet-mounted Sight Integration						4,152,000	9,392,000
F-5 Block II Upgrade Demonstrator						4,000,000	0
Maritime Civil Affairs and Security Training Command Civil Affairs Team TOA Equipment						2,962,000	3,180,000
Navy Expeditionary Intelligence Command TOA Equipment						2,788,000	2,788,000
Special Forces Personal Protection Equipment						2,352,000	5,864,755
E-2C Hawkeye 2000 Family of Systems Synthetic Training Devices						1,800,000	0
Maritime Expeditionary Security Force (MESF) TOA Equipment						1,390,500	1,990,500
NAVELSG Expeditionary Communications Detachment TOA Equipment						1,120,000	1,120,000

USNR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Optics/Night Vision Equipment						1,075,000	1,800,000
Maritime Civil Affairs and Security Training Command Mobile Training Team TOA Equipment						1,059,000	241,000
Deployment Operating Stock						740,000	740,000
Combat Camera Table of Allowance (TOA) Equipment						680,000	680,000
F-5 Maverick Missile Kits Program						410,000	0
Small Arms Simulators for use in Helicopter Sea Combat Squadron 84 (HSC-84) and HSC-85						190,000	0
F-5 Structural Sustainment						0	2,956,000
Total				**$73,816,000**	**$133,463,000**	**$70,000,000**	**$69,028,000**
1. A decrement of $972,000 was applied to USNR FY 2011 NGREA due to FY 2013 sequestration reduction allocation.							

USNR

Major Item of Equipment Substitution List

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

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

USNR

Table 8

Significant Major Item Shortages

NOTE: This table provides a RC top ten prioritized (PR) shortage list for major equipment items 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 equipment data submitted by the Service.

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	C-40A	17	2	$72,500,000	$145,000,000	The C-40 is Navy's designated C-9B/C-20G replacement aircraft. Fifteen of 17 aircraft required to meet Navy's "risk adjusted" inventory objective/red-line requirement have been procured. The procurement of the remaining two aircraft will enable Navy to meet wartime air logistics obligations and retire the C-20G airframe leading to further operational cost savings and improved capability/reliability. The Navy is divesting of the C-9B in 2014.
2	Coastal Riverine Force (CRF) Boats and Communications Upgrades	various	various	various	$200,556,350	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 coastal waters. Funding also required to converge Coastal Riverine Squadron Mobile Ashore Support Terminal (MAST) and Radar Sonar Surveillance Center (RSSC) core internet-protocol (IP) services.
3	Naval Construction Force (NCF) Table of Allowances (TOAs) Equipment	various	various	various	$19,800,000	Funding required to upgrade NCF Navy Expeditionary Combat Command (NECC) Enterprise Tactical Command and Control (NETC2) Systems in support of five Naval Mobile Construction Battalion (NMCB) Reserve deployable units and two Reserve Training Platforms (RTPs) (drill sites with communications equipment)
4	Navy Expeditionary Logistics Support Group (NAVELSG) TOA Equipment	various	various	various	$24,658,410	Funds remaining shortfalls within the three Reserve F01 Navy Cargo Handling Battalion (NCHB) subcomponents: Civil Engineering Support Equipment (CESE), Construction Equipment, and Rapid Response Kits over a three-year period starting in FY 2014.
5	Naval Special Warfare (NSW) Specialized Weapons (Sniper, Individual, and Crew-served)	various	various	various	$1,607,831	With the execution of FY 2011 - FY 2012 NGREA, NSW Reservists were provided a minimal inventory of individual weapons, reducing reliance on Active Component (AC) NSW units for deployable systems. To make fully operational NSW Reserve Special Operators, specialized sniper weapons and unit-level individual and crew-served weapons systems must be procured to provide an independent inventory for training and deployment.
6	NSW Visual Augmentation Systems and Accessories	various	various	various	$4,198,119	With the execution of FY 2011 - FY 2012 NGREA, NSW Reservists were provided a minimal inventory of optics and night vision accessories, reducing reliance on AC NSW units for deployable systems. To make fully operational NSW Reserve Special Operators, specialized weapons optics and night vision systems must be procured to provide an independent inventory for training and deployment.

USNR

Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
7	C-130T Simulator Upgrade	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 cost includes $2.0M for Naval Air Warfare Center Training Systems Division support and is based on current 2F107 upgrade support cost.
8	KC-130J	5	5	$88,000,000	$440,000,000	Procures KC-130J aircraft for the Navy Reserve Component (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.
9	F/A-18E	24	24	$55,089,000	$1,322,136,000	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	7	7	$224,600,000	$1,572,200,000	Procures seven P-8As to fill patrol, reconnaissance, and intelligence gathering capability gap. Remaining 12 RC P-3Cs (35 RC aircraft transferred to AC 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

AIR FORCE VISION

The World's Greatest Air Force, Powered by Airmen, Fueled by Innovation

AIR FORCE MISSION

Fly, Fight, and Win…in Air, Space, and Cyberspace

A. Air Force Planning Guidance

The United States Air Force provides *Global Vigilance, Global Reach, and Global Power* for America through the five enduring Air Force core missions of 1) air and space superiority; 2) intelligence, surveillance, and reconnaissance; 3) rapid global mobility; 4) global strike; and 5) command and control. These missions directly support the Air Force's ability to meet the objectives of the January 2012, *Sustaining U.S. Leadership: Priorities for 21st Century Defense* (Defense Strategic Guidance). 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).

In March of 2013, the Secretary of the Air Force and Chief of Staff of the Air Force (CSAF) jointly issued *The Air Force Fiscal Year 2013 National Defense Authorization Act Implementation Plan*, which calls for "A strong Total Force for the future." In this plan, Air Force leadership mandates a strategic choice to become smaller to resource a fully ready, modernizing Air Force able to defend our interests and project American power across the globe, today and in the future. Recognizing the complexity and importance of the synergy between the Active and Reserve Components (AC and RC) that power our Air Force, senior leaders of the Air Force—Active, Guard, and Reserve—developed a Total Force Proposal that offered an integrated set of modifications to the FY 2013 President's Budget (PB).

Investments in Air Force capabilities and readiness are essential if the Nation is to maintain an agile, flexible, and ready force. To be effective, the Air Force must be deliberately planned for and appropriately and consistently funded. Our highly sophisticated and capable Air Force cannot be reconstituted overnight if it is allowed to atrophy. A smaller, highly capable Air Force is preferable to a larger one of lesser quality. America's Air Force gives our Nation immensely powerful options to advance its long-term interests and protect our way of life. Today's Air Force is an indispensable hedge against the challenges of an uncertain and dangerous future. Every Airman and every citizen should take pride in the fact that the United States Air Force will always provide Global Vigilance, Global Reach, and Global Power for America.

B. Air Force Equipping Policy

The five enduring Air Force core missions shape where we invest the resources we are given. Resource decisions are also informed by the Defense Strategic Guidance and the Budget Control Act of 2011. In particular, sequestration impacts our ability to plan for future year budget actions. The significant reductions the Air Force has had to make in the last few years required

us to make difficult choices with respect to force structure, modernization, and readiness. As a result, the Air Force is working hard to make real progress in eliminating unnecessary expenses and ensuring more disciplined use of resources.

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

With the challenging fiscal constraints, the National Guard and Reserve Equipment Appropriation (NGREA) funding provided by Congress has played an important role for both the Air National Guard and Air Force Reserve in preserving the operational force and strategic reserve that the Air Force needs.

D. Initiatives Affecting RC Equipment

Air Force senior leadership in *The Air Force Fiscal Year 2013 National Defense Authorization Act Implementation Plan*, March 2013, outlines how the FY 2013 National Defense Authorization Act (NDAA) authorized the Air Force to complete actions that had been approved in previous years, directed execution of a mix of the force structure actions contained within the FY 2013 PB and the Total Force Proposal, and directed specific actions in the remaining areas that Congress did not accept from FY 2013 PB. The paper also describes the actions necessary to comply with the FY 2013 NDAA and provides a time-phased addendum that captures the major force structure changes by location.

The FY 2013 PB proposed reducing the Total Force fleet by 223 aircraft in FY 2013 and a total of 287 aircraft between FY 2013 and FY 2017. Correspondingly, it proposed reducing military end strength by 9,900 in FY 2013, with a total reduction of 11,600 by FY 2017. Of that total of 11,600, 4,200 of those reductions were to come from the AC, 5,500 from the ANG, and 1,900 from the AFR. The savings projected as a result of these force structure and end strength reductions would have added up to $1.4B in FY 2013 and $8.7B across the Future Years Defense Program (FYDP).

After submission of the FY 2013 PB, stakeholders in Congress and the states expressed concerns that the Air Force capabilities programmed in the FY 2013 PB would not meet all the Nation's needs. In response to these concerns, the Air Force released an updated Total Force Proposal in

November 2012. The Total Force Proposal retained some of the major elements of the FY 2013 PB proposal, but adjusted some elements to enhance the Nation's Air Force and address concerns that the FY 2013 PB proposal divested too much from Air Force capabilities, which also affected the ANG's capability to support state governors. The Total Force Proposal made the following changes to the FY 2013 PB submission:

- Reversed the elimination of one ANG and one AFR C-130H squadron.
- Reversed the elimination of one ANG KC-135 squadron.
- Reversed the elimination of two ANG A-10 squadrons.
- Reversed the planned shift of all MC-12W aircraft to the ANG.

In addition, the proposal restored some RC missions performed prior to FY 2012 and added new missions for some RC units. In sum, these adjustments

- added two ANG C-130 squadrons and increased the size of one ANG C-130 squadron,
- added one ANG KC-135 squadron,
- transferred one AC A-10 squadron to the AFR, and
- consolidated 11 RC-26B aircraft at one ANG location.

Furthermore, the proposal retained and/or added several intelligence, surveillance, and reconnaissance (ISR), command and control (C2), and operational support missions in the ANG.

Finally, the proposal made the following adjustments to the FY 2012 PB AC force structure:

- Divested two C-130H squadrons.
- Divested four KC-135 aircraft.
- Divested one fighter squadron and transferred one fighter squadron to the AFR.

Most, but not all, of these adjustments take effect in either FY 2013 or FY 2014, with the remainder scheduled to occur not later than FY 2017.

E. Plan to Achieve Full Compatibility between AC and RC

To maintain adequate force structure, the Air Force must balance the strengths of each of the components (Active, Guard, and Reserve) to sustain the capabilities required to meet the challenges created by uncertain strategic and fiscal environments and rapidly evolving threats. Future capability development and the ability to operate anywhere, anytime, especially in anti-access area denial environments, require investment and new, innovative ways of thinking.

The Air Force continues to provide a balanced portfolio of capabilities across the 13 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

Top ANG Equipping Challenges

- Adequate funding for weapon system modernization efforts
- Sustaining legacy weapon systems
- Adequate funding for dual-use capabilities to support civil authorities

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 are among the current and future challenges the ANG mission support community faces. Air Force (AF) funding supplemented by National Guard and Reserve Equipment Appropriation (NGREA) funds were instrumental in executing modernization programs for ANG legacy equipment to remain viable for combatant commanders and supporting civil authorities.

The prolonged high tempo of operations for the ANG supporting combat operations overseas is driving the need to simultaneously modernize and recapitalize our aircraft fleets along with the support equipment required to maintain them. The Air Force Total Force concept affords the ANG access to newer aircraft and equipment, enabling the ANG to remain prepared, relevant, and dependable in DoD missions. However, while this concept has proven to be successful for the Air Force in supporting DoD missions, it creates equipment availability challenges for the ANG's ability to respond to requests for supporting civil authorities.

B. Changes since the Last NGRER

Although the underlying equipping philosophy of the ANG has not changed, significant mission and programmatic changes continue. In support of Total Force, the ANG, in concert with the AC, continues to establish unit associations of AC and ANG components. As a result, fewer facilities, airframes, support personnel, and support equipment are required to ensure the readiness, reliability, and responsiveness of these units. We anticipate more associate unit relationships with the AC and AFR in the near future. Space operations, cyber warfare, and information operations are mission areas growing in importance, and the ANG is responding to requests to allocate manpower and change mission sets for ANG units.

1. Equipment On-hand

a. Current Status

Presently, the ANG has a support equipment availability rate of 96 percent, as compared to rates less than a decade ago of 84 to 88 percent. This rate is comparable to the overall Air Force availability rate and is achieved through the ANG and AC partnering to equip the ANG as an operational reserve force. However, this rate was preceded by a significant decrease in ANG equipment authorizations, either due to mission changes, associations, or introduction of more modern equipment often performing the functions of more than one piece of equipment. ANG equipment is typically procured in support of Federal missions with authorizations that are aligned to Tables of Allowances (TAs), which prescribe the equipment necessary to perform Federal missions. The ANG leverages these TAs for both vehicle and support equipment for its responsibilities to meet both Federal missions and state responses to requests for supporting civil authorities. Although the equipment readiness level is 96 percent of authorized equipment,

shortages do exist. While attempting to fill the 4 percent remaining deficit, the objective is to obtain the assets that are most critical for the warfighter and also for providing support to civil authorities under the National Response Plan and National Response Framework. In addition, the ANG aligned all dual-use equipment and vehicles into the "Essential 10" categories. The Essential 10 are the Chief, National Guard Bureau (CNGB) identified 10 core capabilities needed to respond to emergencies and major disasters in the United States. These Essential 10 capabilities are command and control; chemical, biological, radiological, nuclear, or high-explosives (CBRNE) consequence management; engineering assets; communications; transportation (surface); aviation and airlift; medical; security; logistics; and maintenance.

b. Average Age of Major Items of Equipment

The ANG operates and maintains the oldest aircraft in the Air Force. Overall, the average age of aircraft within the ANG is 25 years. See *Table 2* for the average age of selected aircraft.

2. Maintenance Issues

The ANG's concern about sustaining legacy systems has led to 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. Obsolete Support Equipment

Many support equipment items critical to daily operations are rapidly nearing the end of their expected lives and are becoming increasingly difficult to sustain economically. A-10 Fuel Quantity Tester, C-130 engine removal and replacement system, and 50/60 stray voltage pre-load tester were all systems identified as critical maintenance capabilities requiring immediate attention. The A-10 Fuel Quantity Gull tester is in short supply and lacks a source of supply or repair; a vehicle-mounted C-130 engine removal and replacement system capable of performing all required tasks is needed to ensure maximum daily aircraft availability; and the 50/60 tester currently in use and required for deployed fighter sortie generation is obsolete and unsustainable. Failure to field replacements for this equipment will reduce fully mission-capable rates and have significant potential for grounding fighter aircraft.

b. Advanced Support Equipment Required

This equipment is prioritized to enhance routine maintenance efficiency and safety, while improving maintenance capabilities and reducing overall operational costs. Current maintenance operations depend on equipment built with 1970s and 1980s technology that is now cumbersome to use, expensive to operate, and often creates safety concerns. Procurement of new support equipment with improved capabilities will lead to improved aircraft availability, diminished operating costs, and enhanced capabilities for agile combat support. Advanced support equipment priorities include (1) an alternative tow vehicle utilizing new technology to provide better maneuverability and visibility during towing operations resulting in better utilization of hangar space and aircraft sheltering; (2) MJ-1E electric jammers to improve load crew training effectiveness while enhancing safety (noise and pollution abatement) when compared to legacy diesel engines in enclosed training facilities; (3) VXI-based mid-life upgrade for the Improved

Avionics Intermediate Shop to update electronics, resolve diminishing manufacturing source issues, and extend useful life into 2030.

c. Multi-platform Leak Detection

Existing leak detection procedures employ ineffective and time-consuming soap and bubble methods. Advanced leak detection equipment uses tracer gas or ultrasonic methods to identify leaks in a fraction of the time and with much more accuracy. Compounding problems with existing leak detection procedures is the lack of support equipment capable of maintaining sufficient pressure in a closed system to identify the leaks. Without the modern leak detection equipment, technicians are required to defuel-refuel aircraft to determine the validity of a fuel system repair.

d. Satellite Communications (SATCOM) Radio Support Capability

Multiple mission-design-series aircraft system program offices began installing SATCOM-capable ARC-210 radio systems in 2009. This was in response to a United States Central Command (USCENTCOM) urgent operational need statement for a robust secure line-of-sight (SLOS) and beyond line-of-sight (BLOS) communications capability on the battlefield. This SATCOM system was fielded, however, without the ability to maintain or sustain the equipment. A SATCOM radio test set has been purchased for fighter aircraft applications, but definition of technical order requirements is lagging. The ANG has a plan to procure SATCOM radio test sets with embedded electronic technical orders.

e. C-130 Isochronal Inspection Stands

C-130 isochronal inspection stands no longer meet Air Force Occupational Safety and Health or Occupational Safety and Health Administration standards but are critical to accomplishing periodic inspection requirements. Aging stands (some exceeding 40 years old) require frequent maintenance actions to maintain their serviceability. Current workarounds delay production, increase inspection times, and negatively impact aircraft availability. New stands alleviate unnecessary risk and allow maintainers to re-focus on aircraft specific tasks.

f. Flight Line Generator (72kW)

The 72kW generator can be overhauled to like-new condition at the Hill Air Force Base depot at a cost of $54K per generator. In 2012 new 72kW generators were ordered and are scheduled to begin delivery midyear FY 2014. To bridge this long lead time, the ANG budgeted $3.1M to overhaul some generators in FY 2013 and submitted a budget adjustment of $1.7M for FY 2014 to ensure generators were overhauled and returned to service as soon as possible. A shortfall of about $10M still exists for either refurbished or new generators.

C. Future Years Program (FY 2015–FY 2017)

1. Modernization Efforts

The ANG’s modernization efforts are founded on capability gaps identified by warfighters and civil authorities at two separate annual conferences. In the annual Weapons and Tactics conference, critical capability shortfalls are identified and vetted in an open and rigorous forum of warfighters, who are experts in their respective weapons systems. The results of this forum are consolidated and then approved by the Director, ANG. Capability gaps are verified and validated

into specific programs that are based on commercial or government off-the-shelf technologies, and require only non-developmental integration into a weapons system. The process includes C2, cyber, 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 Priorities* book. For 2013, this process documented an $8.26B shortfall for modernization and recapitalization of the ANG aircraft fleet and associated equipment.

The complement to the ANG Weapons and Tactics conference for domestic operations is the ANG Domestic Operations Equipment Requirements (DOERs) conference. This forum identifies critical capability shortfalls for supporting civil authorities and is oriented towards emergency managers from the states. The DOERs conference took on a joint perspective in 2012, and the second annual National Guard Joint Domestic Operations Equipment Requirements (JDOERs) conference will be tentatively held in April 2014 and hosted by the CNGB. 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 capability needs to accomplish state missions. The conference is organized by functional areas within the Emergency Support Function framework. The ANG and the Army National Guard (ARNG) will use the output from this conference to publish the annual JDOERs Book.

2. Modernization Programs and Shortfalls

A-10: In 2013, the ANG completed installations of a second ARC-210 radio on its A-10s to fill a USCENTCOM urgent operational need. These radios allow simultaneous SLOS and BLOS communications capability with C2, ground troops, and other aircraft. The countermeasures processor in the ALQ-213 electronic warfare management system was also upgraded with NGREA funding. This upgrade enables ongoing software upgrades to the ALQ-213 as threats continue to evolve. NGREA will also finish 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 during combat search and rescue missions. These two modernization efforts should conclude in FY 2014.

The ANG A-10 fleet is planned to receive the following upgrades in the next two years if sufficient funding is available: 1) a high resolution display to replace current performance instruments and utilize the digital imagery capability of new advanced targeting pods; 2) the digital radar warning receiver (RWR), which will significantly improve all RWR functions, reducing response times to radio frequency threats; 3) a pilot-selectable overt/covert landing light, which allows pilots to choose a night vision compatible light when the situation dictates; 4) a replacement intercom and three-dimensional audio system to reduce the workload associated with interpreting communications from up to four radios simultaneously; 5) a parking brake, which will allow pilots to sit alert in their aircraft, or refuel in austere locations without requiring ground personnel to place and remove chocks; and 6) an anti-jam Embedded Global Positioning System (GPS)/Inertial Navigation System and antenna that will allow the A-10 to navigate and use precision guided weapons in a contested environment.

The Air Force continues to fund Operational Flight Program software updates for the common AC and RC fleet. However, the program is not fully supported due to insufficient funding. Also,

the A-10 engine upgrade or replacement has been identified as a critical need for years, but presently no program exists to mitigate the deficiency.

C-5: There are currently 16 C-5s in the ANG inventory. Those C-5s will be replaced with 12 C-17s by FY 2015. Modernization efforts for ANG C-5s have been discontinued due to pending retirements.

C-17: Installation of Large Aircraft Infrared Countermeasures (LAIRCM) on the C-17 remains a top priority. All 16 ANG C-17 aircraft are funded by supplemental appropriations to receive LAIRCM upgrades. Initial installations began in the second quarter of FY 2012 and should be complete by the end of 2013 if the impact of sequestration doesn't affect the program. The remaining 16 C-17 aircraft being introduced into the ANG are aircraft transferred from the AC that already have the LAIRCM system installed. Maintaining common configurations and capabilities between the ANG and AC C-17 fleets is a priority for the Air Force.

C-130H: The Air Force fully funded LAIRCM with Overseas Contingency Operations funding. Presently, the ANG has LAIRCM installed on 104 of 119 aircraft, with completion of the balance of the upgrades expected by February 2014. They are also funding improved cockpit armor and crashworthy seats for loadmasters. The ANG has used NGREA to accomplish 54 installations of capability for Real Time Information in the Cockpit (RTIC), which provides timely information to aircrews in the present-day network-centric battle space and greatly increases survivability in combat operations. This 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 2013 NGREA. Installation of Square Window Doors for improved detection and countering of surface-to-air missiles are underway using a combination of Air Force and NGREA funding. Future projects funded by NGREA include an In-flight Propeller Balancing System that will improve reliability and save fuel by eliminating periodic ground maintenance. Also, the Electronic Propulsion Control System (EPCS) which will improve aircraft availability and safety by accelerating propeller response time. The Avionics Modernization Program (AMP) was unfunded in the FY 2013 Presidential Budget due to its cost. However, the FY 2013 NDAA prohibited official termination of AMP until a business cost-versus-benefit analysis was completed by the Institute for Defense Analyses (IDA). IDA recommended the Air Force develop an alternative to the AMP that provides nearly the same capability at significantly lower cost. The official release of the IDA study was November 14, 2013, and Congress has ninety days to respond to the study.

C-130J: Although the C-130J brings major system enhancements to the C-130 fleet, precision airdrop capabilities and protection against surface-to-air missiles are necessary. Ongoing C-130J modernization efforts include increased firefighting safety to address the landing gear warning horn during Modular Airborne Fire Fighting System (MAFFS) operations, and installations will begin in April 2014. Current unfunded modernization requirements for the ANG C-130J fleet include MAFFS weather situational awareness, LAIRCM, AAR-47 Missile Warning System improvement, and Single Pass Precision-guided Airdrop capability.

EC-130J: NGREA funding 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 SATCOM radio

upgrades and an enhanced situational awareness suite upgrade with NGREA to bridge the gap in available capability while awaiting the longer term solution to be provided by AFSOC. The AFSOC solution to meet the enhanced situational awareness requirement is referred to as the Special Operations Forces Air Mission Suite (SAMS) Enhanced Situational Awareness (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, and completion of the SATCOM upgrade. The capability required for optimum employment of the EC-130J relies greatly on the continued production of a Special Airborne Mission Installation and Response (SABIR)/Fly-Away Broadcast System (FABS) solution, which will allow all the EC-130J aircraft to be capable of supporting military information operations.

LC-130: A production contract was awarded for a digital EPCS and installation on each of the ten LC-130s. October 2014 is the target completion date for this program. Also, the evaluation of the NP2000 eight-bladed propeller for the LC-130 is complete and the program is ready to move into production and fielding. The NP2000 significantly improves take-off performance in deep snow fields and reduces or eliminates use of the jet-assisted take-off rocket motors. The ANG has started efforts to update all the technical orders to support the propeller sets already purchased under the test program. An additional $16M is still required to equip the remainder of the LC-130 fleet. The Crevasse Detection Radar enables the LC-130 to identify and avoid crevasses in the deep field locations where they typically land. The program is operational, but the ANG is continuing to update the radar and improve operational usability. The ANG is also working closely with the National Science Foundation to make it easier for the science community to make use of the LC-130 platform for research purposes. Use of innovative equipment that has minimal impact on the structure of the aircraft speeds the approval process and significantly reduces the engineering required to install science equipment on the aircraft. Future LC-130 requirements include Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) avionics upgrades to maintain worldwide flight capability.

HC/MC-130: The Air Force is funding installation of an emergency locator transmitter and airborne direction finder, upgraded communication suite, oil cooler augmentation, aircrew flight equipment storage racks, and crashworthy seats for loadmasters. The ANG, AFR, and Air Combat Command (ACC) have joined efforts to upgrade aircraft defensive systems by providing an ALQ-213 to fully integrate all defensive systems. ANG is also fully funding a program to integrate heavy equipment airdrop capabilities into the cargo compartment to better support dismounted pararescue personnel. The minimum capabilities for the HC/MC-130 to remain relevant to the Air Force 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 and personnel recovery task force, increased engine performance, and CNS/ATM avionics upgrades to maintain worldwide flight capability. Recapitalization of ANG HC-130s is planned to begin in 2017.

E-8C Joint Surveillance Target Attack Radar System (JSTARS): The Air Force is pursuing the option to recapitalize the E-8C JSTARS. To be prudent, the ANG is continuing to fund modernization of the current JSTARS platform with NGREA funds to address operational equipment requirements needed for current operations. NGREA funding has delivered a communications suite with an integrated Internet-protocol (IP)-based chat capability, fulfilling a

USCENTCOM urgent operational need; purchased initial spares for the Enhanced Land Maritime Mode for the radar; enhanced cooling carts to enable maintenance during the day in the heat of the deserts in deployed locations; purchased 8.33 kHz VHF radios for a voice-over-data, frequency-spacing capability; and upgraded International Maritime Satellite service from Swift64(B) to Swift Broadband (C). The ANG used FY 2012 NGREA to fund the Multi-agency Communications Capability, which will provide enhanced interoperability between JSTARS, strike assets, and ground elements of special operations and customs and border protection assets. The ANG plan to fund an upgraded personnel recovery communications system and add a global imagery server with 2013 NGREA was changed to address more pressing problems with the primary mission equipment. The Air Force is now planning a fleet upgrade of the primary mission equipment (airborne radar signal processors, computers for operator workstations and blue force tracking hardware) to resolve issues with diminishing manufacturing sources for parts. Additionally, the Air Force is replacing the Joint Tactical Information Distribution System terminal with the Multi-functional Information Distribution System Joint Tactical Radio System.

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. To date, Congressional appropriations have funded 52 AESA radars for the ANG. However, ANG F-15C units also operate the only combat-coded legacy APG-63(v)0 radar systems in the CAF and must convert these older radars to AESA. The second highest modernization priority is an out-of-band solution to allow the F-15C to detect targets in highly contested electromagnetic environments. Over the past few years, the Air Force has provided funding for digital video recorders, an upgraded central computer and software program, and limited aircraft rewiring. The ANG used NGREA funding for its F-15C aircraft to integrate the Advanced Targeting Pod and a new cockpit display enabling visual identification of targets of interest on night Aerospace Control Alert missions. Because ANG F-15C aircraft are more than 20 years old, cockpit displays are inadequate from both an operational and maintenance perspective. NGREA funding will be used to upgrade cockpit displays to provide improved capability to present vital targeting information, reduce task loading, and improve pilot situational awareness. NGREA funding will also be used to procure and install the hardware required to carry the critically important back-of-launcher (BOL) external countermeasures system. BOL dramatically improves ANG F-15C survivability against widely-proliferated advanced threats. NGREA 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 Air Force. 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 all F-15C 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 funding. This effort will meet the urgent need at least three years earlier than the program of record. The Air Force stopped sustainment of the Tactical Electronic Warfare System in FY 2013, before the replacement Eagle Passive Active Warning and Survivability System (EPAWSS) was operational. The F-15E is the lead for EPAWSS, followed by the F-15C, but neither aircraft will receive EPAWSS for several years, because it has not yet entered development. Consequently, ANG F-15C aircraft will have a significant gap in electronic warfare capability for up to 10 years as they await the EPAWSS upgrade.

F-16: NGREA is funding installation of SLOS and BLOS communications suites; higher data rate processors for vital systems upgrades; high-resolution Center Display Units; the Scorpion HMIT; enhanced self-protection suites; and the advanced identification, friend or foe (AIFF) combined interrogator transponder, a system acknowledged by USNORTHCOM as a critical requirement for homeland defense. Over the last years, ANG NGREA funding has supported Block 30 HMIT, Center Display Units, 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 Air Force has, thus far, funded updates to the Operational Flight Program software required to support all of these systems, but all modification hardware and installs have been NGREA-funded. Other NGREA funded acquisitions include Block 42 ALQ-213, AIFF, and Block 40/50 JHMCS. The lack of funding for Block 40 AIFF in the AF budget will create a capability shortfall as the aircraft move to the ANG from the other components. 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 infrared-guided man-portable shoulder-launched surface-to-air missiles, the ANG is also investigating procurement of an off-the-shelf pylon-mounted missile warning system 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 pilot workload by synchronizing and spatially separating multiple radios.

HH-60G: The ANG HH-60G fleet is undergoing a NGREA-funded program to enable direct communication with civilian emergency responders. The AFR and ANG are teaming up to replace single-band SATCOM, VHF/FM, VHF/AM, and UHF/AM radios with four ARC-210 multi-band radios. The ANG is funding the first aircraft modification and associated support, such as updated technical orders to validate the new system while the AFR and ANG continue to budget for funding for retrofitting the remaining aircraft. The ANG supports a temporary smart, multi-function color display (SMFCD) program while ACC continues to develop a permanent SMFCD solution. The ANG has already been flying with SMFCDs for three years, and the permanent solution is still years away. 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 capabilities for point designation and full motion video. Furthermore, the HH-60G fleet is rapidly aging and experiencing an increase in maintenance rates and component failures, which dictates 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 plans to receive no less than four of these aircraft (Congressionally-mandated). The Combat Rescue Helicopter is the program of record that will fully recapitalize the HH-60 fleet, but the current fiscal environment puts this program at risk.

KC-135: Changes in employment concepts put the KC-135s in high-threat areas. This vulnerability requires addition of LAIRCM capability. ANG, with Air Mobility Command support, completed a second round of testing involving ground and compatibility flight tests to evaluate a low-cost pod solution originally developed by the Department of Homeland Security

for commercial aircraft use. The ANG also partnered with the Navy to create an affordable path forward for the podded LAIRCM system. There is currently no AF funding for the IR countermeasures on the KC-135. 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 as well as 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 funding becomes available.

Remotely Piloted Aircraft (RPA): The ANG has eight operational RPA units: five MQ-1 units, located in Arizona, California, North Dakota, Texas, and Ohio; a classic associate in Nevada; plus two MQ-9 units, one in New York and one in Tennessee. The ANG also operates one MQ-1 Formal Training Unit (FTU) and field training detachment (FTD) in California and one MQ-9 FTU/FTD in New York. Squadron operations centers (SOCs) 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; multilevel 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 civil airspace controlled by the Federal Aviation Administration; more rapid exploitation of support data; and rapid data file transfer and sharing.

C-32B: In FY 2012, the C-32B received NGREA for communication system upgrades. 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. Funding was not immediately available. The ANG was able to provide NGREA funds to partially modernize the C-32B communication equipment while AFSOC continues to try and develop 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 connect 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.

Battlefield Airman (BA): BA capabilities are associated with combat controllers, Guardian Angels (GAs) and tactical air control parties. The ANG has been active in the past year supplying numerous solutions to meet critical capability gaps The ANG continues to use NGREA to support the BA Operations (BAO) kit program. The BAO kit provides the BA with enhanced situational awareness and communication capabilities. Due to the large number of

units requiring equipment and continuous advancements in technology, this program will continue for many years. The ANG has been able to continue to upgrade communication equipment, personnel protective equipment, and fund a program to provide rescue vehicles years before ACC was scheduled to have funds available. The minimum capabilities for BA to stay relevant are improved weapons, continued advancements with coded spot trackers, and short-wave infrared devices. The capabilities for optimum employment require wireless solutions, improved night vision devices, advanced tactical headsets, and less-than-lethal weapons. Up to this point, attempts to modernize and upgrade weapons carried by GAs have been unsuccessful. Although the mission of GAs is more aligned with special operations, they are only authorized weapons purchased by the Air Force Security Forces Center.

Control and Reporting Center (CRC)/Air Control Squadron: Continued changes to mission requirements outpaces planned upgrades to capabilities and service life extension programs (SLEPs), creating numerous shortfalls. Air Force Space Command's recent plan to remove theater deployable communications assets from the CRC will significantly impact ANG training capabilities. Funding is needed to address shortfalls in the CRC internal C2 network and data-link capabilities; fulfill live mission training requirements; and enable an effective approach to support airborne and ground mission crew training. Additional tactical generators are still required to reduce the number of forward-deployed assets, and realize a 20 percent reduction in fuel consumption ($10M). ACC's efforts to extend the service life for the AN/TPS-75 ($36M) and replace existing equipment with the Three Dimensional Expeditionary Long-Range Radar ($2.2B) will assure these systems meet current and projected mission requirements. In the interim, modernization using modular elements will address shortfalls in critical capabilities and urgent requirements identified in recent evaluations ($74M).

Component Numbered Air Force/Air Operations Center (AOC): The ANG, ACC, and Air Force Materiel Command are collaborating to upgrade six ANG AOC suites to the AOC 10.1 Recurring Event 11 system configuration. The ANG invested NGREA funding in FY 2013. This improved baseline will allow ANG units to train on compatible and interoperable systems, and ensure mission-capable personnel are ready. These upgrades are one component of a larger package of upgrades that will allow Distributed Mission Operations (DMO) and process integration within the AOC mission. Following the major updates being accomplished with FY 2013 and FY 2014 funding, the next cycle of capital equipment replacement for the six ANG AOC sites is programmed to begin in FY 2017. Ultimately, the desired system configuration requires a Core Radio Package solution for all six ANG sites. The Core Radio Package consists of multiple radios and data-link capabilities and has a funding shortfall of $5M. Other AOC system shortfalls are in intelligence, which requires additional targeting workstations to train targeteers ($2M).

Expeditionary Air Traffic Control, Deployable Radar Approach Control (D-RAPCON): The ANG uses the AN/MPN-14K system; this system operates on 1950s analog technology that received minor radar upgrades in the 1980s. Current technology is now digital and beyond, and many of the subsystems are no longer commercially available or produced. Replacement systems for the ANG AN/MPN-14K RAPCON are being funded by the Air Force under the Air Traffic Control and Landing System program element. A total of 10 digital D-RAPCON systems will be procured for the ANG. The D-RAPCON initial operational capability is planned in FY 2017 and full operational capability in FY 2021. 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. As part of the Guard's "fly before you buy" policy, both flight and mission crew simulator proofs of concept are constructed in partnership with government technology development centers and industry. This approach ensures that production decisions are made only after evaluation by ANG subject matter experts, resulting in reduced risk, cost, and schedule. Current ANG simulation programs include: production and fielding of 18 KC-135 Boom Operator Simulation Systems; 17 ANG Advanced Joint Terminal Attack Controller Simulation Systems, which require $15M for full deployment; the C-130H Multi-Mission Crew Trainer, which requires an additional $3M for full deployment; technology and obsolescence upgrades for the F-15 and F-16 unit simulators requiring $4 to $6M per year through the FYDP; LVC capability improvements at the seven ANG AOCs, 601st AOC, and four Air Defense Sectors requiring $3M; and a $2M HH-60G Aircrew Procedures Trainer for the 150th Fighter Wing to support 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. Additional unfunded requirements include two high-fidelity C-130J weapons system trainers at $50M.

Cyber Warfare (CW) and Information Operations: Over the past two fiscal years, the ANG has used NGREA funding to equip and modernize three of the ANG CW units in Kansas and Maryland with a baseline Cyberspace and Critical Infrastructure Range (CCIR). FY 2012 NGREA funded installation of an additional CCIR at a new CW unit in Washington; provisioned network traffic simulators to CCIRs in Delaware, Rhode Island, and Washington; and provided Kansas with capability for conducting cyber Red Team and Opposing Force exercise events. Current NGREA efforts will equip three ANG CW units with a capability for rapid coordination and information sharing in real-time plus CCIR capability to a new CW unit in California. The ANG will pursue acceleration of Air Force equipment for hunter and cyber vulnerability assessment operations in at least one ANG unit.

RC-26B: The RC-26B recently completed six years of distinguished operations supporting United States Special Operations Command (USSOCOM) operations. Six aircraft were modified with USSOCOM funding adding additional communication capabilities and self-protection for use by special forces. These six will have the specialized equipment installed by USSOCOM removed, and the ANG will use FY 2013 NGREA to replace the mission system operator station; upgrade the onboard communications suite (including incorporation of civil/law enforcement radios); upgrade antenna mounts and tactical data links; and add an improved EO/IR turret.

Distributed Common Ground System (DCGS): Historical operations tempo and focus on theater operations has necessitated training DCGS operators during actual combat missions. There has been no AF funding and insufficient time to develop an AF DCGS Weapons System Trainer (WST) to maintain the currency of DCGS operators. Without a WST, ANG DCGS personnel will be unable to maintain proficiency or currency. Consequently, the ANG DCGS Weapons System Council is partnering with the 480th ISR Wing, the AC parent wing for the AF DCGS enterprise, to develop a Total Force WST solution. Without commitment and investment,

the ANG will fail to meet the objectives of the AF's 2025 DCGS Vision and struggle to meet surge requirements of the combatant commanders for processing, exploitation, and dissemination driven by operational plans for both permissive and contested environments.

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; SF professional gear, and small arms ranges. These programs are ongoing and are expected to continue well beyond the current fiscal year. The ANG SF forecasted the following modernization shortfalls for FY 2015–FY 2017: 1) $1.8M for simulated training munitions, 2) $8M for explosive detection equipment, 3) $6M for less-than-lethal equipment, and 4) $18M for SF mobility bags to completely equip ANG SF forces for deployments to fully meet requirements. The solution for small arms ranges is being developed with cooperation from both the ARNG and the ANG to make the most efficient use of available funds. The ANG relies heavily on the other components as well as other agencies to utilize available small arms ranges. Scheduling conflicts and, in some cases, expenses for using a range, both civilian and military, is the norm. The minimum capabilities required to keep SF Airmen relevant are continued funding of mobility bags for professional gear. Capabilities needed for optimum employment require continued support for ongoing programs, such as less-than-lethal weapons, explosive detection kits, and small arms ranges.

Medical: The ANG currently maintains four operational Expeditionary Medical Support (EMEDS) +25 equipment platforms and two training sets. ANG has upgraded 2 of 4 of its current operational EMEDS basic modules to the new EMEDS Health Response Team (HRT) module. The 17 CBRNE–Enhanced Response Force Package (CERFP) units have received upgraded medical equipment and supplies per approved allowance standards. The 10 Homeland Response Force (HRF) units also have the upgraded medical equipment and supplies and are current.

The medical resupply requirement established last year listed three HRF and CERFP medical resupply assemblages, which have been received, and one EMEDS HRT resupply assemblage, which is scheduled for production in FY 2014. However, the ANG anticipates total shortfalls of $5M based on an anticipated new allowance standard block upgrade for EMEDS.

Engineering: Prime power and firefighting equipment shortages continue to limit the ANG's ability to concurrently support home stations, overseas deployments, and civil authorities. For example, prime power requires in excess of $3M in power generation capability. Insufficient capacity exists in three Federal Emergency Management Agency regions. To redress the lack of capacity, the ANG purchased a power generation package for the 150th Civil Engineer Squadron in New Mexico as an initial investment using NGREA funding, and plans additional purchases as funding becomes available for the 118th Civil Engineer Squadron in Tennessee and one other location on the East Coast. Additionally, Bomb Squad Emergency Response Vehicles (BSERVs) and Total Containment Vessels (TCVs) are critical requirements to facilitate response by explosive ordnance disposal teams. The BSERVs and TCVs are procured, and expected delivery is to occur over the next 12 months. Capabilities to bridge military communications with those of first responders are another critical shortfall. The requirement is for $14.9M in equipment to redress the shortfall to the ANG's ability to support civil authorities whether in Federal or state status.

3. Equipment Shortages and Modernization Shortfalls at the End of FY 2017

For the past three years, the ANG has emphasized modernization, upgrades, and procurement in communications and firefighting. These efforts were focused in both combat operations and civil support operations. In communications, the ANG sought to leverage networks and data links to bring current information and data directly to aircraft cockpits and BA; 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 responders. In firefighting, the ANG brought aboard an improved MAFFS-2 in time for the 2012 wildfire season and, in 2013, 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

With the need to fully fund ongoing operations and continued pressure on defense budgets, obtaining adequate funding for both procuring new equipment and modernizing existing equipment continues to be a challenge. Sustained NGREA funding over the past three years coupled with contributions by the corporate Air Force has enabled the ANG to start or complete projects that add significant capabilities to the Total Force. Additionally, the ANG is concerned with its ability to satisfy requests to support civil authorities with its dual-use equipment. Changes to unit missions, coupled with organizational changes to increased classic associations, have created a decrease in authorizations for ANG equipment, which decreases the ability to respond to requests to support 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 requirements for homeland operations.

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Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Air Refueling							
Air Refueling, KC-135R	KC-135R	$53,100,000	138	138	138	138	138
Air Refueling, KC-135T	KC-135T	$53,100,000	24	24	24	24	24
Airlift							
Airlift, C-130H	C-130H	$21,000,000	139	139	139	136	136
Airlift, C-130J	C-130J	$61,700,000	16	16	16	16	16
Airlift, C-17A	C-17A	$237,300,000	24	32	32	32	32
Airlift, C-5A	C-5A	$139,600,000	3	0	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	$221,700,000	13	13	13	13	13
EW, EC-130J	EC-130J	$50,700,000	3	3	3	3	3
EW, RC-26B	RC-26B	$4,200,000	11	0	0	0	0
Fighter							
Fighter, A-10C	A-10C	$13,000,000	72	72	72	72	72
Fighter, F-15C	F-15C	$24,400,000	92	92	92	92	92
Fighter, F-15D	F-15D	$24,400,000	19	19	19	19	19
Fighter, F-16C	F-16C	$7,000,000	254	254	254	254	254
Fighter, F-16D	F-16D	$7,200,000	22	22	22	22	22
Fighter, F-22A	F-22A	$160,100,000	18	18	18	18	18
Operational Support							
Op Support, C-21A	C-21A	$2,300,000	2	2	2	2	2
Op Support, C-32B	C-32B	$115,700,000	2	2	2	2	2
Op Support, C-38A	C-38A	$10,400,000	2	2	2	2	2
Op Support, C-40C	C-40C	$75,500,000	3	3	3	3	3
Rescue							
Rescue, HC-130N	HC-130N	$21,000,000	5	5	5	5	5
Rescue, HC-130P	HC-130P	$21,000,000	2	2	2	2	2
Rescue, HH-60G	HH-60G	$11,900,000	10	0	0	0	0
Rescue, HH-60M	HH-60M	$17,600,000	7	15	15	15	15
Rescue, MC-130P	MC-130P	$21,000,000	4	4	4	4	4
Miscellaneous Equipment							
MD-1A/B	MD-1A/B	$1,900,000	21	21	21	21	21
MQ-1B	MQ-1B	$3,100,000	36	36	36	36	36
MQ-9A	MQ-9A	$8,800,000	12	12	7	7	7

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

ANG

Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Equip No.	Average Age	Remarks
Air Refueling			
Air Refueling, KC-135R	KC-135R	52	
Air Refueling, KC-135T	KC-135T	54	
Airlift			
Airlift, C-130H	C-130H	24	
Airlift, C-130J	C-130J	9	
Airlift, C-17A	C-17A	14	
Airlift, C-5A	C-5A	42	
Airlift, LC-130H	LC-130H	28	
Airlift, WC-130H	WC-130H	48	
Electronic Warfare (EW)			
EW, E-8C	E-8C	13	ANG has the TE008A (E-8 trainer) with 23 years average age
EW, EC-130J	EC-130J	13	
EW, RC-26B	RC-26B	19	
Fighter			
Fighter, A-10C	A-10C	33	
Fighter, F-15C	F-15C	30	
Fighter, F-15D	F-15D	30	
Fighter, F-16C	F-16C	24	
Fighter, F-16D	F-16D	25	
Fighter, F-22A	F-22A	8	
Operational Support			
Op Support, C-21A	C-21A	28	
Op Support, C-32B	C-32B	10	
Op Support, C-38A	C-38A	16	
Op Support, C-40C	C-40C	10	
Rescue			
Rescue, HC-130N	HC-130N	20	
Rescue, HC-130P	HC-130P	47	
Rescue, HH-60G	HH-60G	23	
Rescue, MC-130P	MC-130P	47	
Miscellaneous Equipment			
MQ-1B	MQ-1B	5	
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 programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017
Modification of Inservice Aircraft			
F-15	$51,455,000	$180,280,000	$72,506,000
F-16	30,000	1,670,000	1,482,000
F-22A	15,537,000	22,721,000	22,047,000
C-17A	23,170,000		2,767,000
C-40	1,500,000	1,200,000	
C-130	4,166,000	5,580,000	5,369,000
C-135	21,299,000	20,050,000	17,500,000
H-60	1,907,000	1,052,000	839,000
Aircraft Replacement Support Equipment	824,000		
Vehicular Equipment			
Passenger Carrying Vehicles	258,000	258,000	266,000
Medium Tactical Vehicle	1,914,000	1,545,000	1,591,000
Security and Tactical Vehicles	712,000	712,000	733,000
Runway Snow Removal & Cleaning Equipment	1,874,000	1,874,000	1,930,000
Electronics and Telecommunications Equipment			
Air Traffic Control & Landing System	2,025,000	5,968,000	6,147,000
General Information Technology	3,709,000	3,757,000	3,870,000
AF Global Command & Control System	10,090,000	17,017,000	17,528,000
Theater Battle Management C2 System	150,000	150,000	150,000
Air & Space Operations Center - Weapon System	1,752,000	1,752,000	1,805,000
Tactical Communications-Electronic Equipment	1,288,000	1,288,000	1,327,000
Base Communications Infrastructure	13,334,000	15,862,000	16,338,000
Communications & Electronics Modifications	1,416,000	1,416,000	1,458,000
Other Base Maintenance and Support Equipment			
Night Vision Goggles	2,714,000	1,148,000	1,182,000
Mechanized Material Handling Equipment	2,645,000	1,629,000	1,678,000
Contingency Operations	5,448,000	6,066,000	6,248,000
Total	**$169,217,000**	**$292,995,000**	**$184,761,000**

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014[1]
FY 2012 NGREA Equipment			
Air Superiority/Global Precision Attack			
A-10/F-15/F-16 Avionics Upgrades	$14,358,555		
A-10/F-15/F-16/HH-60 Helmet-mounted Cueing System	30,360,020		
A-10/F-15/F-16 Advanced Identification, Friend or Foe (AIFF) and Sensor Enhancements	8,567,310		
A-10/F-15/F-16 Defensive Systems Upgrades	5,117,964		
A-10 AN/ARS-6 v12 Lightweight Airborne Radio System (LARS)	6,900,000		
A-10/F-15/F-16 Communications Suite Upgrade	4,009,216		
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	42,339,200		
C-130 Propulsion Upgrade	4,415,000		
C-40C High Speed Data	3,399,186		
C-130H/J, KC-135, EC/HC/MC-130 Survivability	700,000		
C-130J Increased Firefighting 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	4,668,613		
F-15/F-16/A-10 Simulators	2,650,234		
MQ-9 Reaper Mission Training Device (MTD)	336,000		
Air Operations Center (AOC) Communications Training Lab	291,138		
Personnel Recovery/Special Operations			
HC/MC/EC-130 Communication and Avionics Upgrade	11,927,860		
EC-130/C-32 Communication Upgrade	8,065,154		
Security Forces Equipment	8,486,205		
Tactical Air Control Party (TACP) Survivability Equipment	5,208,781		
Battlefield Airmen Communication and Data Link Equipment	1,958,030		
Guardian Angel Combat Survivability Equipment	1,874,145		
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	3,292,083		

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2012	FY 2013	FY 2014[1]
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			
Explosive Ordnance Disposal (EOD) Equipment	5,400,000		
Potable Water Production and Prime Power	1,508,250		
Firefighting			
Firefighting 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)	7,582,778		
Common Operating Picture (COP)	5,085,200		
Liaison Command and Control Kit	830,027		
Mass Care			
Disaster Relief Beddown Sets (DRBS)	600,000		
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		
FY 2013 NGREA Equipment[2]			
Air Superiority/Global Precision Attack			
A-10/F-15/F-16 Helmet Mounted Cueing System		$7,689,250	
A-10/F-15/F-16 Communications Suite Upgrade		16,439,142	
A-10/F-15/F-16 Avionics Upgrades		44,610,647	
A-10/F-15/F-16 Defensive Systems Upgrades		18,821,243	
A-10/F-15/F-16 Advanced Identification Friend or Foe (AIFF) and Sensor Enhancements		10,662,475	
A-10 Austere Field Operations Enhancements		3,540,000	
Advanced Targeting & Synthetic Aperture RADAR Pods		64,628,038	
Rapid Global Mobility			
C-130/KC-135 Tactical Data Link and Communications Upgrade		4,460,000	
LC-130 Crevice Detection Equipment		2,500,000	
C-130H/J, KC-135, EC/HC/MC-130 Defensive Systems		41,736,000	
C-130H/LC-130 Enhanced Engine and Propulsion Performance		12,800,000	
C-130/KC-135 Interior/Exterior Night Vision Lighting		500,000	
C-40C Airborne Data Loader		255,000	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2012	FY 2013	FY 2014[1]
Simulation/Distributed Mission Operations (DMO)/Training			
Joint Terminal Air Controller (JTAC) Simulators with ARCNET Gateways		15,375,000	
KC-135 Boom Operator Simulator System (BOSS) / Flight Deck Simulator Upgrade		995,000	
F-15/F-16/A-10 Simulators		21,568,857	
MQ-9 Reaper Mission Training Device (MTD)		336,000	
C-130 Multi-mission Crew Trainer		1,600,000	
ANG Range and Instrumentation Upgrades		3,255,000	
HH-60/RC-26 Aircrew Procedures Trainers		1,300,000	
Command and Control Training Equipment		685,000	
Personnel Recovery/Special Operations			
HH-60G Communication and Avionics Upgrade		10,789,632	
HC/MC/EC-130 Communication, Avionics & Sensor Upgrade		23,000,000	
HC/MC-130 Cargo Compartment Equipment		4,103,633	
EC-130 Defensive Systems		750,000	
Special Tactics/Guardian Angel/Joint Terminal Attack Controller Equipment		13,750,341	
Global Integrated ISR/Space Superiority/Cyberspace Superiority/C2/Incident Awareness and Assessment			
Cyber Training Equipment/Cyber Operations Modernization		2,070,000	
Air Operations Center Capability Upgrades		6,450,000	
Power Distribution Panel System		2,750,000	
Eagle Vision Capability Upgrades		11,400,000	
MQ-1/MQ-9 Data Transfer and Sharing Upgrade		479,000	
RC-26B Avionics, Communications & Sensor Upgrade		7,728,000	
E-8C JSTARS Communication and Avionics Upgrade		5,860,000	
Logistics			
C-130 Support Equipment		4,000,000	
Flight Line and Back Shop Advanced Logistics Equipment		19,257,083	
Communications			
Joint Incident Site Communications Capability (JISCC) and Vehicles		6,250,000	
Public Works and Engineering			
Potable Water Production		1,030,906	
Prime Power Vehicles & Generators		1,308,056	
Explosive Ordnance Disposal (EOD) Equipment, Vehicles & Robots		6,760,000	
Firefighting			
Firefighting Vehicles		11,283,483	
Firefighting Support Kits		562,563	
Mass Care			
Disaster Relief Beddown Sets (DRBS)		8,403,158	
Disaster Relief Mobile Kitchen Trailer (DRMKT)		4,790,771	
Public Health			
Medical Rapid Response Equipment		175,000	
Expeditionary Medical Support (EMEDS) Modernization		1,537,426	
Security Forces			
Security Forces Equipment		14,765,571	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2012	FY 2013	FY 2014[1]
Modular Small Arms Ranges		9,141,366	
Emergency Management			
CBRN Detection & Decontamination		2,827,359	
Total	**$315,000,000**	**$454,980,000**	

1. Service FY 2014 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2014 will be provided in next year's NGRER.

2. A decrement of $5,020,000 was applied to ANG FY 2013 NGREA due to FY 2013 sequestration reduction allocation.

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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 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Airlift					
Airlift, C-130H	C-130H			-3	
Airlift, C-17A	C-17A	+8			
Airlift, C-5A	C-5A	-3			
Electronic Warfare (EW)					
EW, RC-26B	RC-26B	-11			
Rescue					
Rescue, HH-60G	HH-60G	-10			
Rescue, HH-60M	HH-60M	+8			
Miscellaneous Equipment					
MQ-9A	MQ-9A		-5		

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Table 6

FY 2011 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2011 Planned Transfers & Withdrawals							
Air Refueling							
Air Refueling, KC-135R	KC-135R	+1	+5				
Airlift							
Airlift, C-130H	C-130H	+1	0				
Airlift, C-130J	C-130J	-4	-6				
Airlift, WC-130H	WC-130H	+1	-1				
Fighter							
Fighter, F-15C	F-15C	-3	+3				
Fighter, F-16C	F-16C	-27	-3				
Fighter, F-16D	F-16D	+1	0				
Fighter, A-10C	A-10C		+12				
Fighter, F-22A	F-22A		+7				
FY 2011 P-1R Equipment							
Modification of In-service Aircraft							
A-10				$46,021,000	$72,529,080		
F-15				0	71,848,000		
F-16				37,292,000	56,392,100		
C-5				15,036,000	2,596,000		
C-17A				458,000	5,391,000		
C-130				166,587,000	84,922,600		
C130J Mods				5,364,000	0		
C-135				4,032,000	299,000		
E-8				129,924,000	5,630,000		
H-60				3,278,000	0		
Aircraft Replacement Support Equipment				3,292,000	14,600,000		
Vehicular Equipment							
Passenger Carry Vehicle				0	66,000		
Medium Tactical Vehicle				17,134,000	4,017,000		
Items Less Than $5M (Cargo & Utility Vehicles)				3,413,000	3,413,000		
Items Less Than $5M (Special Purpose Vehicles)				10,589,000	10,589,000		
Fire Fighting/Crash Rescue Vehicles				5,427,000	7,611,000		
Items Less Than $5M (Materials Handling Equipment)				1,233,000	1,233,000		
Runway Snow Removal and Cleaning Equipment				15,634,000	9,187,000		
Items Less Than $5M (Base Maintenance Support Vehicles)				9,265,000	9,265,000		

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Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Electronics and Telecommunications Equipment							
Air Traffic Control & Landing System				9,424,000	0		
National Airspace System				6,544,000	10,992,000		
Theater Air Control System Improvement				6,337,000	4,181,000		
General Information Technology				992,000	0		
Theater Battle Management C2 System				642,000	1,034,000		
Air & Space Operations Center Weapon System				2,438,000	4,929,000		
NAVSTAR GPS Space				1,002,000	0		
MILSATCOM Space				30,789,000	0		
Tactical Communications-Electronic Equipment				37,000,000	88,674,000		
Base Communications Infrastructure				42,640,000	40,610,000		
Communications & Electronics Mods				389,000	0		
Other Base Maintenance and Support Equipment							
Night Vision Goggles				563,000	545,000		
Mechanized Material Handling Equipment				1,200,000	0		
Items Less Than $5M (Base Support)				1,400,000	1,400,000		
FY 2011 NGREA Equipment							
Air Superiority/Global Precision Attack							
Advanced Targeting Pods						$68,047,424	$80,561,082
E-8C Communications Suite Upgrade						14,999,996	14,999,996
A-10/F-15/F-16 Helmet-mounted Cueing System						10,056,143	10,056,143
A-10/F-15/F-16 Communication Suite Upgrade						2,943,045	4,718,840
A-10/F-15/F-16 Avionics Upgrades						8,662,747	10,968,417
A-10/F-15/F-16 Advanced Identification, Friend or Foe (AIFF) and Sensor Enhancements						1,693,250	1,811,237
A-10/F-15/F-16 Defensive Systems Upgrades						1,557,148	1,557,148
Rapid Global Mobility							
C/HC/MC-130/KC-135 Data Link and Sensor Upgrades						17,136,636	14,142,278
C-40C High Speed Data						8,500,000	2,500,000
Large Aircraft Infrared Countermeasures (LAIRCM) Self Protection Suite						3,428,969	4,169,684
C-130 Propulsion Improvements						1,764,550	1,920,282
C-130/C-17/C-5 Loadmaster Safety Equipment						1,600,000	1,600,000
LC-130 Polar Ice Crevasse Detection Radar						200,000	200,000
Simulation/DMO/Training							
KC-135 Boom Operator Simulator System						12,482,801	11,822,800
JTAC Desktop Trainers with ARCNet Gateway						1,020,000	1,020,000
F-16 Weapon System Trainer/Unit Training Device Technology Refresh						721,250	712,770
MQ-9 Reaper Mission Training Device						125,000	226,007
Search and Rescue/Special Operations/Agile Combat Support							
Special Tactics/JTAC Assault Zone Equipment						12,605,982	9,639,936

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Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Urban Search and Rescue Kits						9,179,082	9,179,082
Security Forces Equipment						4,999,003	4,977,493
HH-60G Communication and Avionics Upgrade						4,885,000	4,559,740
Guardian Angel Combat Survivability Equipment						3,759,466	3,533,329
Personnel Recovery Task Force Operations Center						2,404,138	2,404,138
Multiple Mission Design Series (MDS) Leak Detectors						1,188,500	263,200
H/MC-130 Cargo Equipment and Engine Upgrade						1,031,998	104,368
Battlefield Airman Communication and Data Link Equipment						679,827	2,334,846
Global Integrated ISR/Space Superiority/Cyberspace Superiority/C2/Incident Awareness and Assessment							
Senior Scout Modernization						4,800,000	4,786,316
Cyber Modernization - Cyber and Critical Infrastructure						2,999,200	2,499,020
Domain Infrastructure Capability Enhancement						672,000	672,000
Transportation							
R-11 Fuel Servicing Tank Truck Adapters						36,800	36,800
Communications							
Joint Incident Site Communications and ASA Command Post Consoles						9,917,237	9,917,237
Public Works and Engineering							
Airfield and Route Clearance Equipment						5,523,198	5,523,198
Potable Water Production and Storage Equipment (ROWPU)						1,163,057	993,162
Explosive Ordnance Disposal Personal Protective Equipment (PPE)						200,000	646,248
Firefighting							
Personal Protective Equipment Structural Firefighting						4,142,935	4,142,935
Emergency Management							
Mobile Emergency Operations Center (MEOC)						5,111,070	4,991,070
Common Operating Picture (COP)						82,191	0
Mass Care							
Disaster Relief Beddown Sets (DRBS)						7,120,425	3,492,665
Religious Support Team Equipment for EMEDS, FSRT and CERFP						242,500	0
Fatality Search and Rescue Team Equipment						92,000	61,005
Public Health							
Modernization of Existing Expeditionary Medical Support						9,218,368	9,218,368
HAZMAT Response							
HAZMAT Response Package						3,007,065	3,037,160
Total				**$615,339,000**	**$511,953,780**	**$250,000,000**	**$250,000,000**

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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 deployable in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired equipment item.

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 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 equipment items 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 equipment 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-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.
3	HH-60 Situation 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.
4	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.
5	F-16/F-15/A-10 Radar Warning Receiver (RWR) and Defensive System 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, which 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.

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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	Multiple Mission-Design-Series (MDS) 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.
7	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.
8	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.
9	E-8C (JSTARS) Global Integrated ISR; PR Compatible Interrogation Radio, IBS Modernization, Combat Identification Capability, Radio Calibration Tools, and Multi-agency Communication Capability	91	81	$7,574,986	$613,573,942	Provides overwatch of potentially hostile extraction areas via secure imaging, intelligence reports of electronic intelligence (ELINT), signals intelligence (SIGINT), human intelligence (HUMINT) in support of target nomination and Identification, CID to allow organic identification to multiple sensors on the aircraft permitting target quality identification to forces, and the ability for aircrew to calibrate multi-band radio systems after performing in-flight adjustments.
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:** Risks to aircraft vulnerability/survivability during combat operations due to legacy defensive systems
- **Data Link and Secure Communications:** Non-standard airborne capabilities supporting image/video, threat updates, and communications for combat missions

In February 2012, the CSAF issued *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 National Guard and Reserve Equipment Account (NGREA) has played an increased role in preserving the operational force and strategic reserve the Air Force needs.

The Air Force Reserve (AFR) is fully engaged across the full spectrum of operations, providing the strategic capacity to respond to national crises and the day-to-day operational capability to maintain ongoing missions. In 2003, the AFR surged, with 23 percent of its force activated in response to 9/11 and support for Operation Iraqi Freedom, and again in 2010, with 12 percent of its Airmen activated to support Operation Enduring Freedom. More recently, the AFR supported the Total Force with an average of seven percent of its Airmen contributing to operational day-to-day, Air Expeditionary Force, mobilization, and war effort missions—including providing immediate response to Hurricane Sandy in New Jersey and Operation Juniper Micron in Mali.

Over the last two years, the Air Force Reserve provided eight percent of the forces supporting Air and Space Expeditionary Force (AEF) missions, including Operations Coronet Oak, Theater Security Package, Noble Eagle, and Enduring Freedom. This makes the Air Force Reserve Command (AFRC), as one of 10 Major Commands, the fourth largest contributor to Total Force AEF requirements. Transcending quantity, the command prides itself on the quality of its force generation, dedicating the Force Generation Center to the oversight, visibility, and accountability of its forces since 2011, which reported double-digit increases in all of the six measured areas that gauge the effectiveness and efficiency of its AEF processes.

The Air Force uses NGREA to modernize the AFR's aging equipment to maintain leading-edge combat capability. The appropriation bolsters recapitalization of critical RC equipment in the three major areas: mobility air forces (MAF), combat air forces (CAF), and Agile Combat Support (ACS). FY 2012 execution enabled procurement of A-10 and F-16 helmet-mounted integrated targeting (HMIT) systems to comply with combatant commander urgent operational need for low collateral damage, C-130 combat communication systems for battlespace awareness, materials handling equipment to support aerial point of embarkation operations at March Air Reserve Base (ARB), and modernization of the multi-year C-130 Modular Aerial Spray Systems (MASS). The Air Force Reserve has the lead responsibility for WC-130J aircraft, executing all modernization and sustainment functions of the peculiar equipment needed to accomplish the Hurricane Hunter mission. The AFR used FY 2009 NGREA funds to mitigate obsolescence of the Aerial Reconnaissance Weather Officer pallet system and FY 2010 NGREA funds to add civil satellite communications capability to the WC-130J aircraft

The AFR maintains a warfighter-driven requirements process that studies mission needs and solicits, validates, and prioritizes requirements proposals. These are then ranked into the Prioritized Integrated Requirements List (PIRL) and presented to the AFRC Commander for approval. The PIRL executable items then form the AFR Modernization List, which is used to determine the AFR's Fiscal Year Procurement List.

The AFR is working to address Congressional concerns with NGREA obligation rates that do not meet DoD goals. The nature of the NGREA appropriation demands an agile response by the acquisition community. An out-year projection of the AFR's procurement plan assists Air Force Materiel Command (AFMC) in planning acquisition workload and contracting strategy. The AFR is actively presenting three to five year procurement plans to AFMC using courses of action that depict multiple funding scenarios. The longer planning horizons allow earlier initiation of requirements documents to ensure lead command requirement approval prior to allocation of NGREA. The AFR also implemented processes to ensure that acquisition planning is in place prior to the receipt of funds so that proposal requests 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.

While processes are in place for NGREA execution, historical delays with appropriations and authorizations translated to delays with 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, which enables depot organizations to order parts. The uncertainty of obligation authority due to continuing resolutions disrupts this process. Thus, delays cause a ripple effect due to lack of sufficient annual authority, and flying units may suffer from aircraft availability as funding delays result in depot delays.

Overall, NGREA funds have been welcome support to maintaining and modernizing aging equipment. The Air Force Reserve has a successful record of effectively applying NGREA in the areas of MAF, CAF, and ACS to ensure the readiness of Reserve combat capability.

a. Mobility Air Forces (MAF)

The majority of AFR capability exists in the MAF, and it contributes a significant amount of aircrews in diverse mission areas at the highest levels of force readiness. These include unit equipped, classic associations, active associations, and Formal Training Units (FTUs), all together covering 18 percent of aerial refueling, 18 percent of tactical airlift, 30 percent of strategic airlift, 100 percent of Air Force aerial spray, and 100 percent of Air Force Weather Reconnaissance missions. Currently, the AFR has C-5, C-17, C-130, KC-135, and C-40C units where they own and maintain aircraft and equipment.

The C-5 Galaxy provides the Air Force with inter-theater airlift in support of U.S. national defense. The AFR operates C-5 aircraft at the 433rd Airlift Wing, Lackland AFB, Texas, and at the 439th Airlift Wing, Westover ARB, Massachusetts. The 433rd Airlift Wing is home to the Air Force's C-5 FTU, which supports aircrew training for the entire C-5 fleet. The AFR associates with the AC on C-5 aircraft at the 512th Airlift Wing, Dover AFB, Delaware and 349th Air Mobility Wing, Travis AFB, California. Programs like the Wireless Interphone

System, voice and data communication upgrades, Avionics Modernization Program, and Reliability Re-engineering Program have increased operational and maintenance capability while fulfilling mandated airspace requirements.

The C-17 Globemaster III provides the Air Force with inter-theater and intra-theater airlift in support of U.S. national defense. The AFR operates C-17s at the 452nd Air Mobility Wing, March ARB, California and the 445th Air Mobility Wing, Wright-Patterson AFB, Ohio. The AFR associates with the AC on C-17 aircraft at the 315th Airlift Wing, Charleston AFB, South Carolina; the 446th Airlift Wing, McChord AFB, Washington; the 514th Air Mobility Wing, McGuire AFB, New Jersey; the 512th Airlift Wing, Dover AFB, Delaware; 349th Air Mobility Wing, Travis AFB, California; and the 730th Air Mobility Training Squadron, Altus AFB, Oklahoma. Key maintenance items for the Globemaster include communication and warning systems to enhance battlespace awareness and survivability.

The C-130 Hercules provides the Air Force with capability to take off and land on short, unimproved runways normally found during austere operations. The C-130H provides rapid transportation of personnel or cargo for delivery day or night by parachute or landing. It can also be used for aeromedical evacuation of injured personnel. The AFR maintains C-130H aircraft at Dobbins ARB, Georgia; Maxwell AFB, Alabama; Niagara Falls Air Reserve Station (ARS), New York; Pittsburgh International Airport (IAP) ARS, Pennsylvania; Pope Army Airfield, North Carolina; Youngstown ARS, Ohio; Minneapolis-St Paul IAP ARS, Minnesota; and Peterson AFB, Colorado. Peterson AFB, Colorado provides MAFFS capability and Youngstown ARS, Ohio provides Modular Aerial Spray System capability. The 910th Airlift Wing at Youngstown ARS, Ohio is tasked as the only large area fixed-wing aerial spray capability within DoD to control disease-carrying insects, pest insects, and oil spill dispersal. The unit has been involved in year round coverage to suppress mosquitoes carrying the West Nile Virus. The AFR is actively pursuing secure/beyond line-of-sight communication capability, real-time battlespace information in the cockpit with a data link/common operating picture, updated aerial spray systems, and modern propeller control and balancing systems. The AFR HC-130 fleet is also modernizing with a state-of-the-art integrated electronic warfare suite to ensure warfighting capability and fleet safety.

The C-130J is the latest and most advanced version of the C-130, with more fuel efficiency and greater range than previous versions. With increased reliability and maintainability, the C-130J reduces the cost of ownership by as much as 45 percent less than older C-130 models. The AFR maintains C-130J aircraft at the 403rd Air Mobility Wing, Keesler AFB, Mississippi. It supports ground operations through the delivery of paratroopers and equipment to austere runways at forward bases. The C-130J conducts humanitarian relief missions and can be used for medical evacuations.

The AFR's 53rd Weather Reconnaissance Squadron maintains WC-130Js at Keesler AFB, Mississippi, to provide 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 that will be addressed with NGREA funds.

The KC-135 Stratotanker provides worldwide air refueling and strategic airlift in support of U.S. national defense. The Air Force Reserve operates KC-135R aircraft at the 434th Air Refueling Wing, Grissom ARB, Indiana; the 452nd Air Mobility Wing, March ARB, California; the 459th Air Refueling Wing, Andrews AFB, Maryland; the 507th Air Refueling Wing, Tinker AFB, Oklahoma; and the 916th Air Refueling Wing, Seymour-Johnson AFB, North Carolina. AFR KC-135 aircrews have continuously maintained a 1:5 mobilization-to-dwell ratio to support AEF rotations since January 2009, and the aircraft are programmed through FY 2017 to modify voice, data link, and data transfer capability to enhance self-defense capabilities.

The C-40C provides worldwide air transportation for the Executive Branch, Congressional members and delegations, DoD officials, high ranking U.S. and foreign dignitaries, as well as other numerous operations support needs. The 932nd Airlift Wing, at Scott AFB, Illinois, is dedicated to providing the highest level of service to support operational support airlift travel teams, critical mission support and VIPs supporting war, peacetime, homeland defense, and contingency requirements. The Federal Aviation Administration (FAA) issued guidance requiring detection/correction of potential ignition sources in the area of aircraft fuel tanks, which impacted the C-40C. The FAA established a performance-based set of requirements that set acceptable flammability exposure values for fuel tanks prone to explosion or required installation of ignition mitigation means in an affected tank. The program is on track with 50 percent of the fleet expected to be complete by September 2015 and 100 percent by September 2018.

b. Combat Air Forces (CAF)

Currently, the AFR has B-52, A-10, F-16, HH-60, HC-130, and Guardian Angel units where they own and maintain aircraft and equipment.

The B-52 Stratofortress serves as the workhorse of the conventional bomber fleet possessing intercontinental range and a large, diverse weapons payload. The AFR maintains B-52 aircraft assigned to the 307th Bomb Wing, Barksdale AFB, Louisiana and is currently the only command that produces new aircrews for this aircraft through the Flying Training Unit program, providing 100 percent of the formal training for B-52 aircrew combat employment. AFR B-52s require installation of Digital Mission Data Recorders and upgrades to the LITENING Advanced Targeting Pod (ATP) through spiral upgrades to maintain training and combat effectiveness.

The A-10 Thunderbolt II is the primary Air Force close air support ground attack fighter. The AFR maintains A-10 aircraft at the 442nd Fighter Wing, Whiteman AFB, Missouri. Since 2007, the Air Force Reserve has teamed with Air Combat Command to maintain two A-10 associate units. AFR A-10 units from Barksdale AFB, Louisiana, and Whiteman AFB, Missouri, deployed to Afghanistan in the spring of 2012 to fill a mix of 90 and 180-day deployments to support an AEF rotation. This deployment was the first use of the NGREA-purchased fourth generation LITENING targeting pod. The new LITENING pod proved to be a tactical and technological success. AFR A-10s are also receiving a helmet-mounted targeting display and an onboard oxygen generation system to help them operate from austere locations.

The F-16 Fighting Falcon provides air-to-air and air-to-ground combat capabilities in a single-engine multi-role tactical fighter aircraft. The Air Force Reserve flies F-16s at the 301st Fighter Wing, Naval Air Station Joint Reserve Base Ft. Worth, Texas, and the 482nd Fighter Wing,

Homestead ARB, Florida. AFR F-16s are currently receiving an avionics update to include a new smart display, helmet-mounted targeting, and advanced identification friend foe equipment. Communication needs include secure line-of-sight (SLOS)/beyond line-of-sight (BLOS) and a three-dimensional audio system upgrade, which will significantly improve situational awareness, threat reaction, and communication intelligibility. A new radar processor will improve reliability and performance with minimal integration, installment, and purchasing costs, and it is estimated to save over $100K per year for radar repair on each F-16. These updates maintain survivability and combat effectiveness in current and future threat environments.

The HH-60G Pave Hawk mission is to conduct day or night operations into hostile environments to recover downed aircrew or isolated coalition personnel. The AFR operates HH-60G aircraft at the 920th Rescue Wing at Davis-Monthan AFB, Arizona, and Patrick AFB, Florida. 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.

The HC-130N/P conducts day or night operations to affect the recovery of downed aircrews or other isolated personnel from hostile or denied environments during war. They may provide air refueling of recovery force helicopters and tactical delivery via airdrop or airland of rescue personnel watercraft, all-terrain vehicles, and direct assistance in advance of recovery vehicles. Current AFR HC-130N/P inventory is based at the 920th Rescue Wing, Patrick AFB, Florida. The AFR HC-130 fleet is currently integrating a state-of-the-art integrated electronic warfare suite.

Guardian Angel (GA) is an Air Force weapon system consisting of combat rescue officers; pararescuemen; and survival, evasion, resistance, and escape (SERE) specialists operating together to provide a dedicated capability to locate and recover isolated personnel in support of combat search and rescue and personnel recovery programs. Air Force Reserve GA personnel and equipment are assigned to the 920th Rescue Wing, Patrick AFB, Florida. Subordinate 920th Rescue Wing GA units are located at Davis-Monthan AFB, Arizona and Portland IAP, Oregon. Guardian Angel capability is in need of funding to replace and upgrade existing communication and self-defense systems.

c. Agile Combat Support (ACS)

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

- 15 percent of the AF’s explosive ordnance disposal capability
- 15 percent of the AF’s Prime Base Engineer Emergency Force (Prime BEEF) civil engineer capability
- 27 percent of the AF’s Rapid Engineer Deployable Heavy Operations Repair Squadron Engineers heavy construction capability

- 12 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, ensure AFR Airmen are trained and qualified on modern tactical suites and fully prepared for mobilization to relieve high AC dwell rates.

Major ACS vehicle procurements integrate with CAF and MAF modernization efforts that support Reserve contributions to AF missions. Other AF priorities have 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 vehicles, and construction equipment. In addition to vehicle requirements to support continental U.S. base operations, NGREA investments have supported procurement of tactical training vehicles that enable Selected Reserve (SELRES) civil engineering personnel to attain and maintain qualification on expeditionary construction equipment. Several efforts between AFR and the 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 Air Force funding. However, the total AFR vehicle procurement shortfall remains $8.1M as of July 2012.

2. Current Status of Equipment

a. Equipment On-hand

Table 1 provides projected RC major equipment requirements and on-hand inventories to meet assigned missions. These platforms include air refueling, air support, airlift, bomber, fighter, and rescue aircraft.

b. Average Age of Major Items of Equipment

The average age of Air Force Reserve aircraft ranges from 10 years for the C-40Cs to 55 years for KC-135s and B-52s. As these averages increase, there is a direct correlation to a demand for more Operation 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, and must be addressed to sustain the capabilities required to meet national defense demands.

See *Table 2* for the average age of major equipment items as of the beginning of FY 2014.

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 aerial firefighting). This compatibility with the AC is also critical to ensuring the SELRES has the ability to train to AC standards and be ready 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

The Air Force has an ongoing A-10 wing replacement program to replace 242 legacy thin-skin wings. Boeing, who produces the replacement wings, encountered technical and production difficulties, which subsequently impacted initial deliveries. With 117 wings purchased and one wing delivered in 2011, Congress reduced the program's FY 2012 funding and cut 40 wings from the baseline. Independent of Congressional action, Headquarters Air Force further reduced FY 2013 funding by 21 wings and FY 2014 funding by 27 wings. Lost funding was partially restored through the FY 2013 Restore Force Structure funding in the FY 2013 NDAA; however, the baseline remains approximately 46 wings short of threshold requirements (228) to maintain the fleet of record. In 2013, the Air Force determined legacy thin-skin wing repair was too costly to continue. Thin-skin wing repair concludes in FY 2014, leaving only legacy thick-skin wings and new wings to sustain the fleet. Sufficient new wings are available to sustain depot requirements during this transition period.

e. Modernization Programs and Shortfalls

The AFR's list of modernization shortfalls stresses aircraft defense, safety, and data link communications. The following paragraphs provide highlights, and *Table 8* lists shortfalls identified through the AFR corporate process and the AFR FY 2015 Equipment Modernization List.

Modernization of aircraft is required to maintain or reverse degraded capabilities due to materiel age or obsolescence. Major AFR MAF programs include Large Aircraft Infrared Countermeasures (LAIRCM), modular aerial spray systems, secure communication upgrades, and electronics upgrades. Major AFR CAF modernization programs include helmet-mounted targeting systems, avionics and display updates, commercial fire control computers, propeller systems, hostile fire indication systems, mission data recording systems, rotor brakes, and Guardian Angel equipment. These efforts directly address capability shortfalls identified by theater combatant commanders during combat operations.

LAIRCM are necessary to provide an integral self-protection system that also complements flare-based defensive systems currently used and provides increased protection against advanced and emerging infrared missile threats. This requirement was established in 1998 by the LAIRCM Operational Requirements Document 314-92 for C-5s, C-17s, C-130s, and KC-135s.

The AFR will continue to equip C-130s in FY 2014 with the Real Time Information in the Cockpit (RTIC) data link system. These are upgrades with ARC-210 and Situational Awareness Data Link (SADL) radios to provide crews with advanced SLOS and BLOS communications situational awareness and the ability to be dynamically mission re-tasked. This NGREA-funded capability was identified as a combatant commander urgent operational need after program initiation.

AFR F-16s from Homestead AFB, Florida and Joint Reserve Base Fort Worth, Texas have entered the depot to receive HMIT and Center Display Unit upgrades to support a fall 2013 deployment to Afghanistan. Essential aircraft upgrades still required are radar improvements to allow all-weather attack of ground targets, upgraded missile warning systems, and improved jam-resistant Global Positioning System (GPS).

The primary critical need for AFR A-10s is modernization of cockpit avionics and displays and an improved electronic warfare defensive suite. A-10s from Whiteman AFB, Missouri, are processing through the depot to receive the HMIT and the LARS v12 combat search and rescue upgrade. These new capabilities will be in place to support an AFR spring 2014 AEF rotation to Afghanistan.

AFR GA units require training equipment, such as water rescue crafts for use in extreme climates during intensive training and contingency operations. Other ongoing programs include equipment modernization for short-wave infrared night vision devices, weapons accessories, communication equipment, replacements for rigged alternate method zodiac (RAMZ) drop packages and personal protective equipment. As a dynamic mission, GA tactics and capabilities requirements constantly change with the operational environment to meet combatant commander needs.

AFR personnel recovery aircraft need hostile fire indication systems to counter the increasing threat from rocket-propelled grenades, anti-aircraft artillery, heavy machine guns, anti-tank guided missiles, and even small arms. This modification upgrades AAR-47 sensors in five HC-130s and 15 HH-60s, increasing the probability of hostile ground fire detection, and enabling the aircrew to take evasive maneuvers and increase aircraft survivability. In addition, AFR HH-60G helicopters are among the few helicopters in the personnel recovery community that do not possess rotor brakes required for safe shipboard operations. These brakes limit the time required to spin up or slow down the rotor system on a ship's deck and increase safety for ground personnel from spinning rotor blades during maritime operations. FY 2013 NGREA funds have been allocated to this program for upgrade of 15 HH-60G aircraft.

The C-130 Modular Aerial Spray System (MASS) is over 20 years old, no longer in production, and becoming increasingly more difficult and expensive to maintain. A program has been initiated for FY 2014 funding to design and procure a replacement MASS for six C-130H aircraft. This improves system reliability and spray accuracy to meet current and future aerial spray applications directed by the Center for Disease Control, Homeland Defense, and DoD.

AFR C-130s and HC-130s are in need of various propeller systems to increase aircraft survivability and performance. The AFR will install modern high-performance propellers, propeller control systems, and in-flight propeller balancing systems for 48 aircraft to increase engine efficiency, decrease sustainment costs, and increase mission capable rates.

The unique mission profiles flown by the AFR WC-130Js revealed a critical communication capability shortfall. The satellite phone solution, identified by the AFR and WR-ALC, will resolve the communication shortfall and enhance the capability and safety of flight for this national weather reconnaissance capability.

The new LITENING Generation Four (G4) pod has proved to be a tactical and technological success, and the AFR is continuing to upgrade all of its LITENING ATPs to G4 configuration on the F-16, A-10, and B-52 aircraft.

AFR B-52s are in need of Digital Mission Data Recorders to maintain combat effectiveness and effectively accomplish its Formal Training Unit mission. Legacy equipment is no longer

supportable due to a lack of available repair sources. The AFR is working with the system program office to develop the required performance work statement to fulfill this shortfall.

Finally, AFR support equipment has a current shortfall of approximately $115M for sustainment across all functional areas within the command. Assets required include 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 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 Operation and Maintenance funds and improving aircraft availability of C-5 and C-17 aircraft.

B. Changes since the Last NGRER

The force structure changes announced with the FY 2013 President's Budget (PB) included 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. The FY 2014 PB plans to reduce the AFR by another 10 aircraft in Mississippi. These actions reduce the AFR inventory by 71 airlift and aerial-refueling aircraft, as well as 21 fighter jets. This retires the AF's oldest aircraft, makes room for newer models, and consolidates similar types of aircraft at common locations as much as possible. Additionally, some aircraft transfers for FY 2014 and later are on hold pending the outcome of the FY 2014 President's Budget Request.

Changes in the status of AFR equipment programs include the following:

- The C-130 RTIC modification has been completed on six of AFR's C-130 aircraft, five at the 910th Airlift Wing and one at the 914th Airlift Wing. RTIC has been utilized to resolve an urgent-operational-need request to provide SLOS and BLOS capability to the combatant commander. RTIC provides crews enhanced situational awareness capability during airlift, airdrop, and other operations.

- The AFR Simulator and Distributed Mission Operations (DMO) program has made significant advancements this past year in providing better capability in the F-16C Multi-Task Trainers (MTTs) and the A-10C Full Mission Trainers (FMTs). The 301st Fighter Wing, Joint Reserve Base Fort Worth, Texas, and 482nd Fighter Wing, Homestead ARB, Florida, have recently received delivery of a second fully upgraded F-16C MTT complete with state-of-the-art 360-degree visual display systems. The expected delivery date for the third and fourth simulators at each of these locations simulators will be November 2014.

- AFR A-10Cs will also receive the Lightweight Airborne Radio System Version 12 (LARS v12) upgrade in two 442nd Fighter Wing, Whiteman AFB, Missouri FMTs, which will provide a quantum leap in downed aircrew search and rescue capability. The LARS v12 upgrade was funded in May 2013.

- The A-10/F-16 Block HMIT entered production in 2012. AFR A-10 installs began in December 2012, and 20 aircraft have been completed as of July 2013. AFR F-16 HMIT installs began in June 2013 and are projected to be complete by May 2014.

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

- F-16 Software Capability Upgrade 8.0 (SCU 8) began fleet-wide installation in February 2013. In addition to incorporating HMIT and Center Display Unit functionality, SCU 8 also brings LITENING G4 and Advanced Targeting Pod capability, digital Ethernet connectivity, advanced medium-range air-to-air missile (AMRAAM) AIM-120D and AIM-9X digital integration, and many other refinements to the aircraft operational flight program.

- Completion of the A-10C Operational Flight Program Suite 7.b in conjunction with the installation of HMIT and LARS v12, significantly increases search and rescue capability and integrates LITENING G4 and ATP as well. While at the depot, the obsolete Pave Penny system will also be removed to open up space in the avionics bay, reduce aircraft drag, and save money and time by eliminating future system maintenance.

- Contract Award for the procurement of 12 new LITENING Advanced Targeting Pods–Sensor Enhanced (ATP-SE) for CAF aircraft occurred in September 2013. The total cost for this effort includes cost for new pods, spares and containers, activation, and one month of availability support. Four remaining Block One to G4 upgrades are scheduled for contract award in December 2013. AFR is anticipating merging its buy with the ANG to meet minimum buy quantity pricing. Following this, the G4 to ATP-SE kit upgrades are expected to begin in FY 2014.

C. Future Years Program (FY 2015–FY 2017)

1. FY 2017 Equipment Requirements

Table 1 provides projected FY 2015–FY 2017 major equipment inventories and requirements.

2. Anticipated New Equipment Procurements

Table 3 lists planned procurements for the AFR from the FY 2015 President's Budget Request.

Table 4 provides AFR planned NGREA procurements for FY 2012–FY 2014.

3. Anticipated Transfers from AC to AFR

Table 5 lists planned AFR transfers for FY 2015–FY 2017.

4. Anticipated Withdrawals from AFR Inventory

Table 5 also lists planned AFR major equipment withdrawals for FY 2015–FY 2017, 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 2017

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

D. Summary

Effective modernization is the key to not only maintaining the ability to meet contingency taskings, but also to improving the capability of the warfighter. This is more important as sequestration and other budget considerations drive new system acquisitions further into the future, resulting in the demand to upgrade and sustain AFR legacy systems. The AFR receives modernization funding through two primary sources, the Air Force Budget and NGREA, along with any Congressional funding additions. The AFR continues to focus on increased capability through modernization of training and mission platforms as well as installation sustainment. Critical capabilities include modular aerial spray systems, secure communication upgrades, large aircraft infrared countermeasures, electronics upgrades, avionics and display updates, helmet-mounted targeting systems, commercial fire control computers, mission data recording systems, advanced identification of friend or foe systems, Guardian Angel equipment, and vehicle procurements.

In summary, the AFR is committed to improving its execution of NGREA funds to accelerate needed capabilities to its Airmen. It continues to focus on improving defensive systems and communication capabilities without neglecting other modernization requirements. Furthermore, the Air Force Reserve continues to work with partner commands, particularly Air Combat Command and Air Mobility Command, to ensure requirements are fully defined prior to allocating NGREA funds. It also works closely with Air Force Materiel Command to improve acquisition planning. While additional work remains to be completed, improved planning and communication continues to bear fruit for improved NGREA obligation rates for AFR programs.

AFR

Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature	Equip No.	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Air Refueling							
Air Refueling, KC-135R	KC-135R	$74,000,000	62	62	62	62	62
Air Support							
Weather, WC-130J	WC-130J	$73,800,000	10	10	10	10	10
Airlift							
Airlift, C-130H	C-130H	$39,600,000	56	56	54	54	54
Airlift, C-130J	C-130J	$73,800,000	10	10	10	10	10
Airlift, C-17A	C-17A	$281,200,000	16	16	16	16	16
Airlift, C-5A	C-5A	$205,100,000	8	6	0	0	0
Airlift, C-5B	C-5B	$235,300,000	16	5	0	0	0
Airlift, C-5M	C-5M	$328,000,000	0	10	16	16	16
Airlift, C-40C	C-40C	$80,700,000	4	4	4	4	4
Bomber							
Bomber, B-52H	B-52H	$99,000,000	18	18	18	18	18
Fighter							
Fighter, A-10C	A-10C	$12,900,000	56	56	56	56	56
Fighter, F-16C	F-16C	$21,600,000	49	49	49	49	49
Fighter, F-16D	F-16D	$21,600,000	4	4	4	4	4
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, HC-130J	HC-130J	$80,000,000	0	0	0	1	1
Rescue, HH-60G	HH-60G	$27,000,000	15	16	16	16	16

AFR

Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Equip No.	Average Age	Remarks
Air Refueling			
Air Refueling, KC-135R	KC-135R	55	
Air Support			
Weather, WC-130J	WC-130J	18	
Airlift			
Airlift, C-130H	C-130H	27	
Airlift, C-130J	C-130J	13	
Airlift, C-17A	C-17A	15	
Airlift, C-5A	C-5A	46	
Airlift, C-5B	C-5B	29	
Airlift, C-40C	C-40C	10	
Bomber			
Bomber, B-52H	B-52H	55	
Fighter			
Fighter, A-10C	A-10C	34	
Fighter, F-16C	F-16C	29	
Fighter, F-16D	F-16D	29	
Rescue			
Rescue, HC-130N	HC-130N	46	
Rescue, HC-130P	HC-130P	50	
Rescue, HH-60G	HH-60G	25	

AFR

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017
Modification of Inservice Aircraft			
B-52	$11,817,000	$26,014,000	$25,120,000
C-5M	254,320,000		
C-17A	22,187,000	207,000	638,000
C-40	1,200,000	300,000	
C-130	2,550,000	2,675,000	8,142,000
C-135	8,725,000	7,988,000	7,685,000
H-60	1,164,000	1,581,000	941,000
Vehicular Equipment			
Passenger Carrying Vehicles	75,000	75,000	77,000
Medium Tactical Vehicles	3,633,000	1,742,000	1,794,000
Security and Tactical Vehicles	428,000	428,000	441,000
Runway Snow Removal & Cleaning Equipment	294,000	294,000	303,000
Electronics and Telecommunications Equipment			
Air Traffic Control & Landing System	2,025,000	2,025,000	2,086,000
AF Global Command & Control System	80,000	80,000	82,000
Theater Battle Management C2 System	145,000	145,000	145,000
Air & Space Operations Center - Weapon System	1,168,000	1,168,000	1,203,000
Information Transport Systems	9,251,000	3,545,000	3,651,000
Tactical Communications-Electronics Equipment	29,000	65,000	67,000
Base Communications Infrastructure	322,000	328,000	338,000
Communications & Electronics Modifications	1,416,000	1,416,000	1,458,000
Other Base Maintenance and Support Equipment			
Night Vision Goggles	1,168,000	473,000	487,000
Total	**$321,997,000**	**$50,549,000**	**$54,658,000**

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014[1]
FY 2012 NGREA Equipment			
A-10/F-16 Cockpit Modernization (includes A-10/F-16 Center Display)	12,943,417		
Simulators	12,400,000		
Chief Information Officer (CIO) Board Project List	$8,626,015		
F-16 Advanced Identification, Friend or Foe (IFF)	8,082,668		
C-40 High Speed Data	6,880,538		
A-10 Lightweight Airborne Recovery System (LARS) v12	4,859,785		
C-130 Secure Line-of-sight/Beyond Line-of-sight (SLOS/BLOS) Capability	4,245,117		
C-17/C-130 Interphone for Loadmaster/Scanner	3,175,984		
Vehicles	3,033,752		
A-10 On Board Oxygen Generating System (OBOGS)	2,769,684		
Large Aircraft Infrared Countermeasures (LAIRCM)	2,640,415		
F-16 Commercial Fire Control Computer (CFCC)	2,085,518		
A-10/F-16 Day/Night Helmet-mounted Integrated Targeting (HIMIT)	1,981,552		
Support Equipment	825,555		
C-130 Virtual Electronic Combat Training System (VECTS)	450,000		
FY 2013 NGREA Equipment			
LITENING Targeting Pod Procurement & Spiral Upgrades		$47,847,253	
C-130 Electronic Propeller Control System (EPCS)		7,400,000	
KC-135 Large Aircraft Infrared Countermeasures (LAIRCM)		11,054,385	
C-130 Modular Aerial Spray System (MASS)		8,000,000	
HH-60 Communications Suite Upgrade		7,500,000	
Simulators		15,300,000	
C-130 Secure Line-of-sight/Beyond Line-of-sight (SLOS/BLOS) Capability		1,100,000	
A-10/F-16 Helmet-mounted Integrated Targeting (HMIT)		5,499,999	
A-10/F-16 Digital Intercom		3,350,000	
B-52 Mission Data Recording System		800,000	
F-16 ALR-69A Radar Warning Receiver (RWR)		3,602,000	
F-16 2nd ARC-210 Digital Receiver-Transmitter		2,547,000	
HH-60 Rotor Brake		3,000,000	
A-10/F-16 Cockpit Modernization		2,300,000	
F-16 Pylon Integrated Dispenser System plus Infrared Missile Warning System (PIDS+)		2,000,000	
F-16 Advanced Identification, Friend or Foe (AIFF)		2,763,212	
Guardian Angel Tactical Equipment		500,000	
A-10 On Board Oxygen Generation System (OBOGS)		1,117,181	
A-10 Parking Brake/Night Vision Imaging System (NVIS) Landing Light		1,786,000	

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

Nomenclature	FY 2012	FY 2013	FY 2014[1]
Vehicles		295,000	
HH-60 Smart Multifunction Color Display (SMFCD)/Situational Awareness Data Link (SADL)		280,000	
Support Equipment		927,969	
Calculations		100,000	
A-10 Lightweight Airborne Radio System (LARS) V12		80,000	
HC-130 Information Superiority		750,000	
HC-130 AAQ-36 Forward Looking Infrared (FLIR)		100,000	
Total	**$75,000,000**	**$130,000,000**	

1. Service FY 2014 NGREA equipment list was not available in time for publication in the NGRER. Equipment list for FY 2014 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 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks
Airlift					
Airlift, C-130H	C-130H		-2		
Airlift, C-5A	C-5A	-2	-6		Aircraft retirements
Airlift, C-5B	C-5B	-11	-5		Conversions to C-5M model
Airlift, C-5M	C-5M	+10	+6		Conversions from C-5A/B models
Rescue					
Rescue, HC-130J	HC-130J			+1	
Rescue, HH-60G	HH-60G	+1			

AFR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011[1] NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
FY 2011 Planned Transfers & Withdrawals							
Airlift, C-9C	C-9C	-3	+3				
Air Refueling, KC-135R	KC-135R	+3	+3				
Airlift, C-5A	C--5A	-3	-3				
Airlift, C-17A	C-17A	+4	+4				
Fighter, F-16C	F-16	-7	-7				
FY 2011 P-1R Equipment							
Modification of In-service Aircraft							
B-52				$8,761,000	$8,600,000		
A-10				29,467,000	29,513,632		
F-16				4,168,000	30,011,000		
C-5				5,935,000	43,513,000		
C-17A				458,000	1,175,000		
C-130				0	14,528,000		
C-130J Mods				2,805,000	0		
C-135				904,000	68,000		
Aircraft Replacement Support Equipment				13,381,000	0		
Vehicular Equipment							
Passenger Carrying Vehicles				1,267,000	693,000		
Medium Tactical Vehicles				1,266,000	1,496,000		
Items Less Than $5M - Cargo & Utility Vehicles				1,166,000	1,166,000		
Security and Tactical Vehicles				1,823,000	60,000		
Items Less Than $5M - Special Purpose Vehicles				2,135,000	2,135,000		
Fire Fighting/Crash Rescue Vehicles				856,000	854,000		
Items Less Than $5M - Materials Handling Equipment				1,016,000	1,016,000		
Runway Snow Removal and Cleaning Equipment				465,000	0		
Items Less Than $5M - Base Maintenance Support Vehicles				172,000	172,000		
Electronics and Telecommunications Equipment							
National Airspace System				6,544,000	7,131,000		
Mobility Command and Control				1,040,000	0		
Theater Battle Management C2 System				250,000	148,000		
Air & Space Operations Center Weapon System				3,657,000	2,465,000		
NAVSTAR GPS Space				154,000	0		
MILSATCOM Space				3,463,000	0		

AFR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011[1] NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual
Tactical C-E Equipment				3,407,000	7,855,000		
Base Communications Infrastructure				346,000	310,000		
Other Base Maintenance and Support Equipment							
Night Vision Goggles				256,000	496,000		
FY 2011 NGREA Equipment							
C-130 Large Aircraft Infrared Countermeasures (LAIRCM)						$22,600,000	$22,201,486
C-130 Secure Line-of-sight (SLOS)/Beyond Line-of-sight (BLOS)						8,100,000	3,542,182
HC-130 Integrated Electronic Warfare Suite (ALQ-213) with VECTS						6,000,000	5,854,806
Combat Search and Rescue (CSAR) Common Data Link (Microlite)						6,000,000	6,118,030
C-130 Armor						5,800,000	0
C-130 Modular Aerial Spray System (MASS)						4,500,000	0
A-10/F-16 Helmet-mounted Integrated Targeting (HMIT)						4,400,000	7,321,864
A-10/F-16 Center Display Unit						2,600,000	7,166,787
Tactical Communication Headset						2,500,000	811,860
Wireless Intercom						2,230,000	223,125
Security Forces Weapons & Tactical Equipment						2,200,000	2,195,874
MC-130 Integrated BLOS Situational Awareness (SA) Feed (T-1 Mod)						1,500,000	0
R-12 Refuelers						900,000	769,854
Support Equipment						570,000	2,177,394
Vehicles						100,000	2,170,787
HH-60 Smart Multi-Function Color Display (SMFCD)/Situational Awareness Data Link (SADL)						0	218,750
F-16 2nd ARC-210 & Digital 3D Audio						0	5,172,908
Simulators						0	1,028,927
C-17 Palletized Seats						0	375,148
LITENING Advanced Targeting Pod (ATP) Procurement & Spiral Upgrade						0	861,219
Total				**$95,162,000**	**$153,405,632**	**$70,000,000**	**$68,211,000**

1. A decrement of $1,789,000 was applied to AFR FY 2011 NGREA due to FY 2013 sequestration reduction allocation.

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 deployable in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired equipment item.

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

AFR

Table 8

Significant Major Item Shortages

NOTE: This table provides a RC top ten prioritized (PR) shortage list for major equipment items 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 equipment data submitted by the Service.

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
1	C-130 Large Aircraft Infrared Countermeasures (LAIRCM)	62	10	$428,571	$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. Total shortage cost includes spares and Non-recurring Engineering costs.
2	C-130 Secure Line-of-sight/Beyond Line-of-sight (SLOS/BLOS) capability	56	20	$400,000	$8,000,000	Upgrades AFR C-130Hs with ARC-210 and Situational Awareness Data Link (SADL) Radios to provide aircrews with a Real Time Information in the Cockpit (RTIC). Installation for entire fleet and completion of kit buys.
3	A-10/F-16 Day/Night Helmet-mounted Integrated Targeting System (HMIT)	81	36	$144,417	$5,199,012	Funds HMIT for all AFR A-10 and F-16 aircraft. Helmet-mounted displays provide critical flight and weapons information directly to the pilot without looking at panel-mounted instruments.
4	Guardian Angel Personnel Recovery Mission Equipment	3 Teams	3 Teams	$7,900,000	$7,900,000	Capabilities shortfall mission equipment purchase and technical refresh of on-hand equipment used in the personnel recovery mission to include advanced rescue craft, sonar, environmental ensemble, parachute modernization, and mission data management
5	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.
6	HH-60 Improved Radar Warning Receiver (RWR)/Radio Frequency (RF) Jammer APR-39 DV2	15	15	$133,000	$2,000,000	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.
7	HH-60 Hostile Fire Indication System	15	15	$266,667	$4,000,000	Ugrade to ACC program of record to include acoustic sensors and software to alert aircrew subjected to hostile fire and provide the awareness to perform tactical procedures to ensure aircraft and aircrew survivability.
8	C-130 Next Gen Missle Warning System Upgrade	58	58	$1,000,000	$58,000,000	Upgrade of 1970's era or addition of digital Missle Warning System. Air Force Program of record is ALR-69A. This system is also being installed on the KC-46A and being looked at for the F-16C, A-10, and HC-130P/N aircraft.

AFR

Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short	Item Cost	Total Shortage Cost	Rationale/Justification
9	C-130 Modular Aerial Spray System (MASS)	6	5	$4,800,000	$24,000,000	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.
10	Electronic Propeller Control System (EPCS)	62	62	$1,111,320	$69,000,000	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.

Chapter 6
United States Coast Guard Reserve

I. Coast Guard Overview

Since 1790, the Coast Guard (CG) has conducted integrated and layered operations across vast geographic maritime areas of responsibility to meet the evolving threats and challenges facing the Nation. The CG operates in the maritime domain—an enormous and complex environment. The physical characteristics of the sea present varying, dynamic, and dangerous water conditions. Human activity on the water continues to expand in a domain that does not readily sustain it. The maritime industry continues to evolve as the world remains fully dependent on global maritime trade in an advancing technology and information age. Varied and overlapping international and sovereign legal and policy regimes governing the maritime domain pose practical operational challenges. The role of the CG 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 CG is currently organized into six programs, which are critical to achieving specific Quadrennial Homeland Security Review goals and objectives and advancing national priorities that together define the Department of Homeland Security (DHS) missions. Table 6-1 below lists these six programs and their relationship to the Coast Guard's eleven statutory missions.

Table 6-1. Coast Guard Programs and Statutory Missions

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

As described in the *United States Coast Guard 2013 Posture Statement*, the CG is unique in its status as both a federal law enforcement agency and at all times an armed force. The CG actively participates in defense operations and supports geographic combatant commanders (GCCs) by providing capabilities and resources in support of naval forces, including port operations and defense, maritime interception operations, and international training in support of theater security cooperation.

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 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, both Active Component (AC) and Reserve Component (RC), were among the first responders to large scale disasters such as Hurricane Katrina, the Deepwater Horizon oil spill, and Hurricane Sandy.

The CG's distinct blend of authorities, capabilities, competencies, and partnerships provide the capability to support a range of operations that ensure safety, security, and stewardship in the maritime domain. Representing the United States in the International Maritime Organization, the CG leads and advocates improvements to international maritime standards. The CG regularly participates in joint interoperability exercises and training to maintain international partnerships, along with those competencies required to execute the most challenging maritime security missions, including missions that support the requirements of the GCCs. Since September 2001, the CG has provided personnel and equipment domestically for contingency response operations and in support of Maritime Homeland Security requirements.

The CG also performs global missions in support of GCC operational plans, their primary expeditionary resources being eight CG Port Security Units (PSUs) that operate under the Navy Expeditionary Combat Command and are often embedded within the Navy's Coastal Riverine Force (CRF). These CG PSUs are unique because they are principally Reserve-staffed units, consisting of only six AC personnel within a 150 total complement.

Another Reserve-staffed unit within the CG is the Mobile Support Unit (MSU), a Reserve unit managed by the CG Surface Forces Logistics Center, and comprised mainly of machinery technicians. This unit is specifically designed to provide for the logistical needs of patrol boats deployed to regions lacking any base of operations. The MSU is responsible for logistical support operations anywhere in the world where CG 110' Island Class cutters are involved, such as current operations with Patrol Forces Southwest Asia, Bahrain.

A. **Coast Guard Planning Guidance**

To meet the challenges of the dynamic maritime environment, the CG executes a layered, security-in-depth concept of operations, built upon a multi-dimensional framework of authorities, capabilities, competencies, and partnerships to apply its core operational concept of prevention and response. Through this approach, the Service seeks to prevent dangerous or illicit maritime activities and to rapidly and effectively respond to protect the Nation, minimize impacts, and recover.

Coast Guardsmen successfully conduct operations across the mission spectrum in the full range of environmental conditions. Throughout history, the CG has adapted to changing operational environments and new mission priorities.

B. **Coast Guard Equipping Policy**

Equipment used for CG domestic operations is provided through the DHS budget. The CG's AC owns and manages all equipment, including equipment that is allocated for the RC. The AC provides equipment for CG Reserve mobilizations or surge operations using 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) has been funded by DoD through the OCO budget allocation to the CG. This equipment includes boats, spare parts, communications gear, and other special purpose equipment (personnel protective equipment, ISU-90 shipping containers, uniforms, etc.) that are interoperable with the U.S. Navy and allied forces and meet DoD requirements. The CG Reserve primary end users of DoD OCO-funded equipment are the eight PSUs, which deploy in support of the GCCs on a rotating basis, or in response to major world events involving our Nation's Armed Forces.

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

In FY 2013, approximately 935 Selected Reserve (SELRES) personnel were mobilized in support of OCO, compared to 955 in FY 2012. The majority of these mobilized personnel provided security for military outload operations within the continental United States (CONUS). Others served as members of PSUs operating outside CONUS in support of GCC operations.

In order for the CG 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 and augmentation during daily operations, and mobilizations or surges. While the CG Reserve did not reduce total end strength in FY 2013, future budget predictions indicate that workforce reductions in FY 2014 and beyond may occur. Consequently, consideration must be taken in planning towards future budget years to preserve resources for sufficient training and to prevent a "hollow force" that could be ill prepared to respond to contingencies.

D. **Initiatives Affecting RC Equipment**

The PSUs and MSUs maintain a constant state of readiness to deploy for "all threats and all hazards" in support of the GCCs 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 Afghanistan requires the CG's Redeployment Assistance and Inspection Detachment (RAID) teams, comprised of RC and AC personnel. These RAID teams 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 meeting mission requirements entailing shipping equipment. In FY 2013, RAID teams completed 319 missions in Afghanistan, inspected 9,000 containers in Afghanistan and Kuwait, reviewed or generated 2,160 hazardous material shipping documents, and trained more than 2,400 personnel on hazardous material shipping. The RAID teams work from three bases in Afghanistan and one base in Kuwait. They require funding for operations and equipment to sustain recovery of shipments.

Approximately 82 percent of the SELRES force is directly assigned to AC units. These Reservists train and perform their duties alongside AC personnel, executing daily operations to meet CG missions. The remaining 18 percent are assigned to CG Deployable Specialized Forces, e.g., PSUs or DoD units. The GCC contingency plans validate requirements for deployable CG units. These units include PSUs, RAID teams, Strike Teams, MSUs, and the Navy's CRF.

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, CGR personnel serve alongside AC members in support of DHS programs and CG statutory missions.

Top Coast Guard Reserve Equipping Challenges

- Recapitalization and sustainment of PSU communications/weapons:
  - PSU weapon standardization—alignment with NATO/DoD
  - PSU communications equipment—compatibility with DoD forces

The Coast Guard Reserve provides the Service's "in-garrison" surge workforce capability to effectively 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 after Reserve integration occurred in 1995. RFRS assists with prudent strategic planning and defines requirements to ensure disciplined management of the Reserve force. Together, CORE and RFRS produce highly-trained and well-qualified personnel to respond to all threats and all hazards at all times.

The RC is comprised of 8,100 funded billets or positions, which is approximately 20 percent of the CG's total force strength. The CG Reserve Training Appropriation for FY 2013 provided $131.4M for necessary expenses as authorized by law, which include operations, administration and maintenance of the Reserve program, personnel and training costs, and services. The Reserve Training Appropriation does not provide funding for personal property 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 2015–2017. All equipment is procured and accounted for by the AC.

The two main platforms used by the RC are the Transportable Port Security Boat (TPSB) and the Response Boat–Small (RB-S).

25’ TPSB, Generation III

32’ TPSB, Generation IV

The TPSB is operated by Coast Guard PSUs for defense operations providing waterborne security and point defense operations. In FY 2013, the Coast Guard completed a transition from the 25’ TPSB (Generation III) to the 32’ TPSB (Generation IV). The new TPSB offers significant advantages over its predecessor, including increased sea keeping, shock-mitigated seating, diesel propulsion, and enhanced communication and navigation capabilities. The CG operates 52 TPSBs at the PSUs (6 TPSBs per PSU) and at the Special Missions Training Center (SMTC) in Camp LeJeune, North Carolina.

25’ RB-S, Generation I

29’ RB-S, Generation II

The RB-S serves as a mobilization platform for Reservists assigned to Coast Guard stations throughout the Nation and to domestic military outload security operations involving the protection of DoD high-value assets. The Coast Guard continues recapitalization of its RB-S fleet with production of the 29’ RB-S (Generation II). There are 457 RB-S boats assigned to Boat Stations, Maritime Safety and Security Teams (MSSTs), and Marine Safety Units throughout the Coast Guard.

b. Average Age of Major Items of Equipment

Table 2 provides the projected average age of equipment at the start of FY 2014.

c. Compatibility of Current Equipment with AC

PSUs are primary inshore/harbor surface interdiction response assets that conduct the overseas Naval Coastal Warfare mission of harbor defense/port security operations. They also support domestic Ports, Waterways, and Coastal Security and contingency operations in response to natural disasters or national emergencies. Due to their unique mission requirements, TPSBs are

maintained mostly at PSUs. 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 used by the RC are shared with the AC.

d. Maintenance Issues

Units maintain an adequate preventative maintenance schedule but, in some cases, aged equipment such as high-mileage vehicles, tents, etc., require replacement, not maintenance.

e. Modernization Programs and Shortfalls

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

The CG Small Boat Product Line continues working toward fully integrated logistics support for the next generation of TPSB and RB-S boat platforms.

Reserve program staff and capability managers are working towards a major weapons transition for PSUs. PSUs are currently issued the M16A2 rifle, which is no longer used or supported by DoD and provides severe logistical challenges while deployed in support of GCCs for operations and joint DoD and host nation exercises. It's imperative that the CG align with the Joint Forces standard rifle, and subsequently, the DoD logistical infrastructure. Similarly, PSUs must transition to the 9mm pistol to meet NATO weapons requirements and align with DoD components while deployed overseas. PSUs are logistically constrained with their current use of the .40 caliber pistol due to restrictions for shipping and follow-on procurement of ammunition.

Modernization and upgrades to communications equipment will ensure interoperability with DoD. Secure and non-secure data in the field is a required capability in modern military operations, and PSUs require the organic capability to transmit, receive, and process both unclassified and classified data.

f. Overall Equipment Readiness

Recapitalization and sustainment of PSU equipment is a recurring challenge. Twelve years of high operating-tempo deployments and re-deployments for GCCs in support of Operation Iraqi Freedom, Operation Enduring Freedom, Operation Restore Hope, and several CONUS operations such as Operation Noble Eagle and contingencies such as Hurricane Katrina, have left the CG's eight PSUs with depleted consumables and other repair supplies and major equipment that have exceeded their scheduled operational life or have prematurely exceeded wear and tear thresholds. The sustained high operating tempo has yielded a wealth of data from casualty and mishap reports, and other operational reporting, which justify changes and refinements to the current PSU Table of Allowance. One example (cited in paragraph "e" above) is the apparent need to align small arms, ammunition, and digitally encrypted voice and data transmission resources to other DoD units that PSUs have either been attached to or operated alongside of within Joint Security Areas. Other feedback has demonstrated that original PSU equipment or operational logistics support has partially failed in a real world test of PSU readiness and

sustained operations in theater. Examples are the lack of required organic unit assets to support movement: an all terrain forklift, portable scales, suitable weatherproof containers, and other portable operational support resources. Finally, the PSU program recently began a critical small boat acquisition program (TPSB Generation IV) that is at the beginning of its lifecycle. The initial procurement phase ends when crews are properly trained to effectively operate the new boat. This acquisition program requires ongoing support to operation and maintenance budgets to ensure operability of the new boat platforms on a routine basis. Maximum availability of operational boats for seamanship and gunnery training is imperative for RC personnel to attain required qualifications, especially due to the minimal number of training days allotted per month/year.

B. **Changes since the Last NGRER**

The Reserve Training Appropriation overall was reduced from $134M in FY 2012 to $131.4M in FY 2013. Appropriation funding decreases negatively impact 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 through FY 2013, and PPE price increases raised the PPE shortfall from approximately $549K in FY 2012 to $620K in FY 2013. Twenty-four Generation III TPSBs were withdrawn from PSU inventories during FY 2013 because they were replaced with the Generation IV TPSBs.

In FY 2013, PSUs procured eight mobile field kitchens and eight water buffalos, and began replacing outdated forklifts with transportable all-terrain forklifts.

C. **Future Years Program (FY 2015–FY 2017)**

1. FY 2017 Equipment Requirements

Table 1 provides projected FY 2015–FY 2017 inventories and requirements for major equipment. All equipment is procured and accounted for by the AC.

2. Anticipated New Equipment Procurements

For PSUs to align with their DoD counterparts, all eight of the PSUs need to replace their current inventory of M16A2 rifles with M4 rifles, and replace the .40 caliber sidearm pistol with a 9mm DoD-compatible model pistol.

SMTC will procure three Environmental Control Units (ECUs) (HP-2C/388 IPT) at a cost of approximately $392K in FY 2015.

3. Anticipated Withdrawals from RC Inventory

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 2017

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

CG unit operations and maintenance fund 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 four-year cycle, which provides the unit enough funding to fully outfit each member with new/serviceable equipment at the end of a four-year period. The four-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 Reserve Training Appropriation does not pay for PPE. Approximately 5,100 billets, or 65 percent, of the RC have mobilization requirements that require PPE to safely conduct CG operations. The annual shortfall in PPE for RC personnel is estimated to be approximately $1.05M.

Table 6-2 provides the FY 2014 PPE funding shortfall. The absence of PPE funding 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. FY 2014 PPE funding is based on a four-year replacement cycle.

Table 6-2. Coast Guard FY 2014 PPE Funding for the RC

Unit/PPE Type	Cost	# of Personnel	Total	Total/Year
Ashore (Reserve) Basic Ensemble (Boat Station)	$1,620	2,044	$3,311,280	$827,820
Ashore (Reserve) Cold Ensemble (Boat Station)	$1,490	1,493	$2,224,570	$556,143
Ashore (Reserve) Basic Ensemble (Aids to Navigation Team)	$1,620	11	$17,820	$4,455
Ashore (Reserve) Cold Ensemble (Aids to Navigation Team)	$1,490	9	$13,410	$3,353
Sector Ops (Reserve) Basic Ensemble	$1,620	740	$1,198,800	$299,700
Sector Ops (Reserve) Cold Ensemble	$1,490	416	$619,840	$154,960
Tactical (Reserve) Basic/Cold Ensemble (Maritime Security Response Team)	$3,110	124	$385,640	$96,410
Tactical (Reserve) Basic/Cold Ensemble (PSU)	$2,958	320	$946,560	$236,640
PPE per Person Total		5,157	$8,717,920	$2,179,480
Total	$8,717,920			
Total/Year	$2,179,480		Annual Shortfall	
Total Available	$1,130,589		($1,048,891)	

D. **Summary**

The CGR is a flexible and responsive operational force that exists to support the CG roles of maritime homeland security, national defense (domestic and expeditionary), and domestic disaster operations. The CG depends on the Reserve force to be ready to mobilize with critical competencies in boat operations, contingency planning and response, expeditionary warfare, marine safety, port security, law enforcement, and mission support. Sustaining an effective operational reserve requires ongoing funding for training and equipment. Declining budgets ultimately impact training capacity and operational readiness. Since the RC is fully integrated with the AC (PSUs being the only exception), daily operational needs of both components limit the availability of platforms and equipment for Reserve training, qualification, and certification, which further impacts Reserve readiness and, thereby, overall Coast Guard readiness.

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Table 1

Consolidated Major Item Inventory and Requirements

NOTE: This table provides a comprehensive list of selected major equipment items. It provides the projected inventory quantity on-hand (QTY O/H) at the beginning/end of the selected fiscal year (FY). It also provides the quantity required (QTY REQ) to meet the full wartime requirements of the Reserve Component. In accordance with Title 10, the QTY REQ number provides the recommendation as to the quantity and type of equipment that should be in the inventory of each Reserve Component. FY 2015 unit cost estimates are provided by the Military Departments.

Nomenclature	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Port Security Units (PSUs)						
Installation of AN/PRC-117G Wideband, Multiband, Multi-mission Tactical Boat Radio	$18,750	0	0	0	0	80
Fly Away Kit (Portable Satellite Communications Kit)	$5,329	0	0	0	0	16
AN/PRC-152A Wideband Hand-held Networking Radio	$15,392	288	288	288	288	288
Power Amplifier RF-7800UL-V150 (1 per PRC-117G radio)	$20,000	0	0	0	0	80
M4-Variant Rifle	$1,100	176	176	176	176	1,032
SIG P229R DAK 9mm Pistol	$660	0	0	0	0	528
Deployable Medical Officer Kits	$111,000	2	2	2	2	8
Portable Armory	$75,000	1	1	1	1	8
Portable Scales	$9,380	0	0	0	0	32
All-terrain Forklift	$90,000	3	3	3	3	8
Polytetrafluoroethylene 32' Transportable Port Security Boat (TPSB) covers	$1,200	0	0	0	0	48
Vehicle, F550 Stakebed (1 per unit)	$56,000	6	6	6	6	8
Generators w/ Distribution Panel	$500,000	6	6	6	6	6
32' Transportable Port Security Boat (TPSB)	$495,000	48	48	48	48	48
Vehicle, F450 Pickup (5 per unit)	$46,000	40	40	40	40	40
Vehicle, F350 Pickup (4 per unit)	$45,000	32	32	32	32	32
Palm Infrared, Thermal Imager	$9,450	0	0	0	0	16
Utlility Trailer (1 per unit)	$7,000	3	3	3	3	8
Searchlight Set	$7,700	0	0	0	0	8
XTS 5000 Hand-held Radio (1 per boat and 2 spares at each unit)	$5,500	64	64	64	64	64
Counter, Frequency (DC to 500HHZCW)	$4,461	8	8	8	8	8
Analyzer, Communication	$4,390	8	8	8	8	8
Computer, Laptop	$4,000	14	14	14	14	16
Fuel Bladder 3K Gallons	$3,885	80	80	80	80	88
Fuel Containment Boom	$3,395	24	24	24	24	48
Vidmar, Storage Container	$3,246	32	32	32	32	88
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 - 10 MHz, 0 DBM = 1MW/600 OHMS)	$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

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Table 1

Consolidated Major Item Inventory and Requirements

Nomenclature	Unit Cost	Begin FY 2015 QTY O/H	Begin FY 2016 QTY O/H	Begin FY 2017 QTY O/H	End FY 2017 QTY O/H	End FY 2017 QTY REQ
Forklift, 10,000 lb.	$90,000	1	2	2	2	2
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, Pickup (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, General Purpose	$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)						
32' Transportable Port Security Boat (TPSB)	$495,000	4	4	4	4	4
Environmental Control Unit (ECU), HP-2C/338 IPT	$130,497	4	4	4	4	4
ECU, 82-GET35KW8TN	$103,185	1	0	0	0	0
ECU, HP4-DL	$94,259	1	0	0	0	0
ECU, T2-93040G	$82,922	4	2	2	2	2
Drash Shelter (M)	$28,000	3	0	0	0	0
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	0	0	0	0
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	8
Drash Shelter	$9,237	5	0	0	0	0
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	8
* The AC manages all equipment for the Coast Guard Total Force.						

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Table 2

Average Age of Equipment

NOTE: This table provides the average age of selected major equipment items. The average age provides a projected average age of the fleet at the start of FY 2014.

Nomenclature	Average Age	Remarks
Port Security Units (PSUs)		
Radio Set AN/PRC-117G	7	
AN/PRC-117G Wideband-Multiband-Multimission Tactical Radio	12	
AN/PRC-152A Wideband Hand-held Networking Radio	<2	
Portable Armory	2	
All-terrain Forklift	6	
Vehicle, F550 Stakebed (1 per unit)	9	
Generators with Distribution Panel	<2	
32' Transportable Port Security Boat (TPSB)	<2	
Vehicle, F450 Pickup (5 per unit)	2	
Vehicle, F350 Pickup	2	
Utlility Trailer (1 per unit)	9	
XTS 5000 Handheld Radio (1 per boat and 2 spares at each unit)	8	
Counter, Frequency (DC to 500HHZCW)	10	
Analyzer, Communication	8	
Fuel Bladder 3K Gallons	8	
Fuel Containment Boom	<2	
Generator Digital Clock Pulse, Synthesizer (Part #98)	<2	
Tents	2	
All Terrain Vehicle, Gator (1 per unit)	<2	
Generator 15kW	7	
Water Buffalo (1 per unit)	8	
Generator, Signal Synthesizer, Frequency, MG3641N (500 KHZ to 1024 MHZ AM/FM)	5	
Generator 5kW (2 per unit)	2	
Meter, Modulation (AM/FM Carrier Frequency 30 to 100 MHZ)	8	
Voltmeter, Analog (5 HZ to 10 MHZ)	8	
Radio, VHF Motorola XTL-5000 Mobile	8	
Analyser, Distortion (10 Hz-100 KHz)	7	
Mobile Support Units (MSUs)		
Truck, Stakebed Class 8	2	
Truck, Stakebed	10	
Generator, 240kW	7	
Forklift, 10,000 lb.	10	
Trailer, Administrative Support	6	
Trailer, Maintenance Shop	6	

USCGR
Average Age of Equipment

Table 2

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

USCGR

Service Procurement Program - Reserve (P-1R)

NOTE: This table identifies the dollar value of programmed equipment procurement as identified in the P-1R exhibit of the FY 2015 President's Budget Request. All values are costs in dollars and exclude ammunition procurements. Deliveries of procured equipment normally take one to two years before they arrive in the inventory; e.g., items procured in FY 2015 are expected to arrive in RC inventories in FY 2016 or FY 2017.

Nomenclature	FY 2015	FY 2016	FY 2017

Table 3 not applicable for USCGR

National Guard and Reserve Equipment Appropriation (NGREA) Procurements

NOTE: This table identifies the dollar value of planned equipment procurements 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 2014 would be expected to arrive in RC inventories in FY 2015 or FY 2016. All values are costs in dollars.

Nomenclature	FY 2012	FY 2013	FY 2014

Table 4 not applicable for USCGR

Table 5

USCGR

Projected Equipment Transfer/Withdrawal Quantities

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

Nomenclature	Equip No.	FY 2015 Qty	FY 2016 Qty	FY 2017 Qty	Remarks

Service has no planned transfers or withdrawals for the years FY 2015 thru FY 2017.

USCGR

Table 6

FY 2011 Planned vs Actual Procurements and Transfers

NOTE: This table compares planned Service procurements and transfers to the RC in FY 2011 with actual procurements and transfers. FY 2011 is selected as these are the most recent funds to expire. Because the procurement cycle is normally one to two years from funding to delivery, this table identifies only deliveries through the end of FY 2013. Procurement and NGREA columns reflect cost values in dollars.

Nomenclature	Equip No.	FY 2011 Transfers (# of items)		FY 2011 Procurements ($s)		FY 2011 NGREA ($s)	
		Plan	Actual	Plan	Actual	Plan	Actual

USCGR had no planned or actual transfers or procurements of major equipment during FY 2011

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 deployable in wartime. This data meets the Title 10 requirement to identify equipment that is not the most desired equipment item.

Required Item Nomenclature	Reqd Item Equip No.	Substitute Item Nomenclature	Substitute Item Equip No.	FY 2015 Qty	Deployable?	
					Yes	No

Service Does Not Use Substitution to Satisfy Major Item Equipment Requirements

USCGR

Table 8

Significant Major Item Shortages

NOTE: This table provides a RC top ten prioritized (PR) shortage list for major equipment items 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 equipment data submitted by the Service.

PR	Nomenclature	Total Req'd	# Items Short [1]	Item Cost	Total Shortage Cost	Rationale/Justification
1	Installation of AN/PRC-117G Wideband, Multiband, Multi-mission Tactical Boat Radio (1 per boat and 4 at each unit / 10 radios per unit)	80	80	$18,750	$1,500,000	10 required per Port Security Unit (PSU) for 8 PSUs total. These multi-mission boat radios are a PSU requirement of highest priority. Current versions are no longer supported and the newer version provides more operational capability, can be upgraded/supported, is more secure, and is compatible with DoD communications equipment – which is crucial given the joint operations with between PSUs and DoD. Initial funding was provided to purchase the upgraded radios but remains incomplete for radio installation. Without complete installation, these radios do not meet mission requirements.
2	Fly Away Kit (Portable Satellite Communications Kit)	16	16	$5,329	$85,264	2 required per PSU for 8 PSUs total. PSU requirement for self sustainability / overseas contingency operations. These kits enable members to communicate via satelleite in remote areas where other forms of communication are not available or reliable.
3	Power Amplifier RF-7800UL-V150 (1 per PRC-117G radio)	80	80	$20,000	$1,600,000	10 required per PSU for 8 PSUs total. Required to increase the range of the wideband network between the Coast Guard (CG) unit and the DoD Tactical Operations Communications Center.
4	M4A3 (or variant) Rifle	1,032	856	$1,100	$941,600	Each of the 8 PSUs require 129 of the M4 rifles. PSUs must transition from the M16A2 rifle (which is no longer supported) to the M4A3 Rifle to align with the Joint Forces/DoD standard rifle.
5	SIG P229R DAK 9mm Pistol	528	528	$660	$348,480	66 required per PSU for 8 PSUs total. PSU must transition to the 9mm Personal Defense Weapon to meet NATO weapons requirements and align with DoD components while deployed overseas. CG PSUs are logistically constrained with current use of the .40 cal pistol due to shipping restrictions and follow-on procurement of ammunition.
6	Deployable Medical Officer Kits	8	6	$111,000	$666,000	1 required per PSU for 8 PSUs total. The medical officer kit allows PSUs to maintain self sustainability in a vulnerable joint security area where medical transportation for treatment by a CG medical officer incurs additional safety and security risks.
7	Portable Armory	8	7	$75,000	$525,000	1 required per PSU for 8 PSUs total. PSUs must store small arms in compliance with the Joint Commander's requirements for weapons security. PSUs operate in locations often geographically remote from other joint units and cannot rely on joint unit resources for weapons storage capabilities.

USCGR

Table 8

Significant Major Item Shortages

PR	Nomenclature	Total Req'd	# Items Short [1]	Item Cost	Total Shortage Cost	Rationale/Justification
8	Portable Scales	32	32	$9,380	$300,160	4 required per PSU for 8 PSUs total. PSUs are responsible for proper loading of all equipment needing air mobility transport on joint aircraft. Each individual equipment item must be properly loaded and weighed in accordance with DoD requirements. Portable scales provide the capability to properly weigh all PSU equipment prior to loading.
9	All-terrain Forklift	8	5	$90,000	$450,000	1 required per PSU for 8 PSUs total. PSUs require an expeditionary, all-terrain forklift suitable for moving heavy equipment that weighs in excess of five hundred pounds. Currently, many of these heavy pieces of equipment are moved by as many as six CG personnel. This forklift would reduce the probability of personnel mishaps.
10	Polytetrafluoroethylene 32' Transportable Port Security Boat (TPSB) covers	48	48	$1,200	$57,600	1 required per boat or 6 required per PSU for 8 PSUs total. The TPSB is used exclusively by all 8 PSUs for defense operations in support of COCOM operations. The boats have complex electronic systems, and these waterproof, air permeable, durable, and lightweight boat covers allow the boats to be moved and stored without damage from weather elements.

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), as amended, 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 (United States 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 March 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 2015–FY 2017 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 2015–FY 2017
  - 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 2011 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 2015 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 2015, 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 2014.

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 2011 Planned vs Actual Procurements and Transfers. This table compares what the Service planned to procure and transfer to the RC in FY 2011 with actual procurements and transfers. Since the procurement cycle is normally one to three years from funding to delivery, this table identifies only what has been delivered through the end of FY 2013.

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 2015–FY 2017 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 Vice Chief, NGB 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

JAN 0 3 2014

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

SUBJECT: Certification and Statement of Accuracy to Accompany the Annual National Guard and Reserve Equipment Report

References: (a) 10 U.S.C. § 10541(d)
(b) National Defense Authorization Act for Fiscal Year 2008

In combination with the attached Fiscal 2015 National Guard and Reserve Equipment Report, I submit this certification and statement of accuracy as called for in reference a.

To meet specific requirements contained in section 1826 of reference b, the Secretary of Defense directed the Services to provide increased transparency, increased visibility and accountability of National Guard and Reserve equipment. This tracking initiative, the Equipment Transparency Report, was standardized for the Services and is provided to the Office of the Assistant Secretary of Defense for Reserve Affairs semiannually. At present, the Services have not achieved the transparency required to fully account for equipment delivery and inventory projections. To that end, the Army intends to achieve full transparency through the implementation of Item Unique Identification (IUID) as part of Global Combat Support System-Army, projected to reach full operability in FY 2017. The Air Force intends to achieve full transparency through the incorporation of Defense Readiness Reporting System as well as IUID, projected to reach full operability in FY 2018.

The point of contact for this issue is Colonel Anthony Johnson, NG-J4 Logistics and Engineering Deputy Director, at (703) 607-1082.

Joseph L. Lengyel
Lieutenant General, USAF
Vice Chief, National Guard Bureau

Attachment:
As stated

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

Figure B-1. Vice Chief, NGB 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.

Following the 2012 full-operation-capability achievements for the Federal Emergency Management Agency (FEMA) region-based 17 chemical, biological, radiological, and nuclear (CBRN) and High-yield Explosives (CBRNE) Enhanced Response Force Packages (CERFPs) and 10 Homeland Response Forces (HRFs), the NG CBRN response organizations maintained their training and response readiness operating tempo throughout 2013 in completing their required two annual collective training events with integrated local incident commanders and first responders, designated commanders completing the required mission and logistics planning for participation in United States Northern Command (USNORTHCOM) and NGB-level tiered-response CBRN Response Exercises, and responding to State Emergency Management Agency support requests.

The core capabilities of each HRF CBRN Task Force and the 17 CERFPs were enhanced in FY 2013 through the fielding of the Joint Chemical Agent Detector (JCAD). The JCAD is a point detector that will enable the mass decontamination element commanders to detect toxic industrial chemicals/materials and chemical warfare agent hazards at lower levels than the replaced Automatic Chemical Agent Detector Alarm (ACADA) at personnel monitoring stations following wash/rinse operations within the decontamination site. CERFP and HRF commanders were also fielded the AN/PDR-75 Radiac Set employing Optically Stimulated Luminescence (OSL) technology. The OSL dosimeters will replace the dose-of-record thermoluminescent-dosimeters planning and augment the fielded AN/UDR-13 Radiac Set dosimeters.

NG CERFP and HRF dual-use mission equipment was used to respond to Hurricane Sandy by West Virginia and New York CERFP elements; conduct wide-area search operations in support of law enforcement by the Hawaii CERFP; and perform collapsed-building and structural-assessment missions by the West Virginia CERFP after heavy winter snowfalls.

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 resourcing 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. The FY 2013 President's Budget discontinued these two WMD-CSTs. However, the SecDef reconsidered and decided to retain these two units; therefore, 57 WMD-CSTs will remain operational. By statute and SecDef directive, these units perform duties, at the direction of the governor, in support of emergency preparedness programs to prepare for or respond to an emergency involving the use of a weapon of mass destruction in the United States. The WMD-CSTs are also authorized to 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 FY 2013, WMD-CSTs conducted 126 response missions and 615 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 85 responses to suspected CBRN substances, 34 manmade incidents, and 7 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 2013, WMD-CSTs supported the October 2012 Presidential debates, the January 2013 Presidential Inauguration, the February 2013 Super Bowl XLVII, the February 2013 State of the Union, the August 2013 Dr. Martin Luther King 50th Anniversary of the March on Washington, and numerous other state and local events. 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 2013 response and standby missions, WMD-CSTs conducted 1,054 assist missions. Assist missions include contingency operations liaison, capabilities briefs, technical assistance, mission reconnaissance, mutual support on how to minimize vulnerability to a CBRN incident, or WMD-CST personnel provide advice and assistance 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 sum, WMD-CSTs conducted a total of 2,383 events in the first ten months of FY 2013. Additionally, WMD-CSTs conducted 669 collective training events to have operational skills for mission success.

DSCA is a critical mission in the NG support to civil authorities. NGB 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 federal assets, and any other missions as directed to promote stability and security in a state, territory, or the 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 within the United States. 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's Top Equipment Modernization/Shortfall Category List, Figure B-2, is developed annually and identifies systems or capabilities required by the ARNG for modernization and/or filling of shortfalls of equipment in support of domestic and Federal missions. The list includes 18 categories that contain critical dual use equipment that the ARNG continues to focus filling equipment shortages and/or modernization efforts.

Figure B-2. ARNG Top Equipment Modernization / Shortfall Category List

Table 8 Significant Major Item Shortages in the ARNG data tables section provides a top ten prioritized shortage list for major items of equipment. Significant major item shortages are in aviation modernization, transportation, sustainment, and construction engineering equipment.

i. Aviation Modernization

The overall health of the aviation portfolio remains good. The H-60 Blackhawk modernization efforts (M-model procurement, L-model cascades, and A-A-L modernization) are still ARNG's top priority. FY 2015 equipment on-hand (EOH) quantities comprise a mixed fleet of new build, cascaded, and retiring legacy aircraft. At the current H-60 Blackhawk procurement, conversion, and cascade rate (from the A model to the L and M models), it will take until FY 2027 to fully divest the H-60A fleet. The UH-72A Lakota is scheduled to be fully fielded by FY 2015, an acceleration of one year since our last report.

ii. Transportation

The ARNG is participating in the ongoing Tactical Wheel Vehicle reduction studies. Upon completion, the ARNG will be fully aligned with the Army's future force structure transportation requirement capabilities. The ARNG expects to field 1,134 Joint Light Tactical Vehicles (JLTVs) by 2020. Overall, the ARNG expects to have over 20,000 JLTVs by FY 2040. The ARNG's plan to purchase 500 HMMWV ambulances was delayed due to contracting and parts availability. At completion, the ARNG will increase the HMMWV ambulance EOH to 100 percent by third quarter FY 2015.

iii. Sustainment

This equipment category consists of medical, fuel, water, maintenance, and food systems. Technology innovations in water storage, water distribution, and material handling equipment will improve the Army sustainment capabilities. The ARNG continues to field new and improved capabilities such as the Load Handling System Compatible Water Tank Rack (HIPPO) and the future Light Capability Rough Terrain Forklift.

iv. Construction 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 support DSCA and combat missions. The ARNG has used National Guard and Reserve Equipment Appropriation (NGREA) funding over the last few years to supplement base funding for this equipment, which is still a priority shortage category for the ARNG.

b. Effects of ARNG Shortfalls

ARNG's historically high EOH and modernization level comes at a time when the Army faces an historic convergence of strategic challenges. Preserving and improving upon the ARNG's EOH of 91 percent and modernization level of 85 percent is a top priority. However, these modernization shortfalls result in the continued use of the legacy systems and an HD/DSCA capability gap.

Shortfalls of ARNG equipment also impact ARNG's ability to achieve full interoperability with the AC. In today's operations, the Army relies on a robust network to share sensitive mission command information. ARNG shortfalls in communication equipment reduce the ability of the ARNG to provide optimal mission command capabilities during both combat and homeland defense operations. Communications and collaboration between incident site, local responders, emergency managers and other key players are critical. In addition, having a common operating picture facilitates collaborative planning and assists all echelons to achieve situational awareness.

The ARNG is short both 34-ton Semitrailers and 25-ton Semitrailers. Not having adequate hauling and material handling capabilities significantly reduces the ARNG's domestic response capabilities. The addition of HMMWV ambulances will improve the ARNG's ability to provide tactical ambulances capable of reaching the last mile in rugged terrain while conducting operations in support of civil authorities. The ARNG's ability to provide clean water will remain at risk until the HIPPO is fully restored in FY 2017.

Given the ARNG's EOH of 91 percent and modernization level of 85 percent, the ARNG is able to perform its national defense and DSCA missions.

c. ARNG Investment Strategies

The ARNG has used NGREA funding to successfully mitigate key ARNG shortfalls in equipment and modernization efforts. FY 2013 ARNG NGREA funding has allowed the investment of more than $92M in aviation, engineering, and logistics systems. $69M of NGREA funding was used to procure systems that support HD and DSCA missions. Additionally, the ARNG has invested $196M of NGREA funding to support individual and collective training through the procurement of simulator systems like the Individual Gunnery Trainer and the

Virtual Convoy Operations Trainer. Recent NGREA funding has focused on the procurement of high-priority Critical Dual Use (CDU) items that have a projected shortfall and adversely impact overall readiness.

The past ten years have brought vast improvements in the overall training, equipping, and readiness of the operational ARNG. Equipping and modernizing the ARNG comparably with the AC will ensure readiness, support an operational force, and promote interoperability. Future procurement and sustainment programs must ensure that units are trained, ready, and modernized concurrent with the AC. The overarching tenet of the Army National Guard Equipping Strategy is to ensure that Soldiers and units always have the required equipment to execute assigned missions. Shortfalls not filled through new procurement will be mitigated through cross-leveling, improved transparency, life-cycle management, and ensuring authorization documents are in place prior to fielding of equipment.

3. Air National Guard Equipment

The Air National Guard continues to work towards recapitalization and modernization of our support equipment and vehicles to optimize utility. To facilitate this objective, the ANG continues to work closely with other major commands and NGB, along with Headquarters Air Force on budgeting and execution of funds for equipment and vehicles. DoD procures ANG support equipment for executing national defense missions, utilizing authorizations that are aligned to Tables of Allowances (TAs). The preponderance of this equipment can be used to perform both national defense and DSCA 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, the majority of all authorized ANG support equipment (371,472 pieces) have valid uses in both national defense and DSCA 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 96 percent (357,693 pieces) of authorized support equipment and vehicles on-hand within the categories of the Essential 10 Capabilities (see Table B-1).

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

August 2013							
CABABILITY	AUTH QTY	INUSE QTY	FILL RATE	AUTH COST	INUSE COST	NEEDED QTY	NEEDED COST
Aviation SE	59,248	57,763	97%	$4,180,558,964	$3,651,647,123	1,485	$528,911,841
Civil Support & Force Protection	2,788	2,581	93%	$906,436,715	$839,136,715	207	$67,300,000
Command & Control	10,164	10,074	99%	$586,924,425	$585,664,923	90	$1,259,502
Communication	5,726	5,754	100%	$47,290,570	$30,758,563	0	$0
Engineering	25,400	24,024	95%	$211,388,335	$168,657,355	1,376	$42,730,980
Logistics	85,757	81,289	95%	$82,479,760	$67,559,286	4,468	$14,920,474
Maintenance	108,483	104,624	96%	$2,366,331,380	$1,957,171,023	3,859	$409,160,357
Medical	8,563	9,036	106%	$3,267,135	$2,702,734	0	$0
Security	65,353	62,548	96%	$129,850,141	$114,466,656	2,805	$15,384,485
TOTAL SE	371,472	357,693	96%	$8,514,527,425	$7,417,763,378	14,290	$1,079,667,639
VEHICLES	16,207.00	14894	92%	$1,238,676,205	$863,305,932	1,313	$375,370,273
TOTAL SE & VEHICLES	387,679	372,587	96%	$9,753,203,630	$8,281,069,310	15,603	$1,455,037,912

Currently, less than 1 percent of ANG equipment is deployed in support of overseas contingencies.

a. ANG Equipment Shortfalls

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 95 percent. There has been improvement in the support equipment availability and vehicle "in commission rates." However, shortfalls exist in equipment and vehicles designed for transporting people and equipment to areas requiring rescue and recovery. Additionally, aging support equipment, such as hydraulic lifts, fork lifts, test equipment, and refueling trucks are plagued by availability of parts because spares are no longer manufactured and replacements are slow to arrive. Without spare parts, these equipment and vehicles cannot be maintained in operational condition, and, if funding is not available to replace the equipment or vehicles, they are used far beyond their life expectancy, and reliability suffers.

ii. Engineering

The overall engineering fill rate status is excellent at 95 percent. However, prime power, route clearance, search and rescue, and firefighting equipment shortages are inhibiting the ANG's ability to concurrently perform home station and overseas deployments, or provide support to civil authorities. For example, power generation capability used to provide stable, reliable electrical power in deployed environments either abroad or during NG DSCA operations needs an investment of over $18M to redress shortfalls. During DSCA operations, this power could be a life-saving capability for an 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 a 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 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 civil support requirements. For example, the ANG acquired, through NGREA funding, power generation capability for the 150th Civil Engineering Squadron, which is the pilot unit for this capability.

iii. Transportation

Vehicle on-hand status is excellent at 92 percent. Additionally, with the new vehicle life-cycle management targets, the impact of utilization for supporting civil authorities is minimized for most of the fleet. The average age of the vehicles in the ANG fleet is ten years and has a health or in-commission rate of 86 percent. With shrinking budgets and competing priorities, the resources applied to these vehicles are also diminishing. For example, the average age of 20.7 years in the medium tactical, low density, and high demand vehicles is impacted directly by these shrinking budgets, competing priorities, and available resources. The result affects the ANG's capability to perform DSCA and state missions requiring high water and massive debris removal.

iv. Security

The overall security fill rate status is excellent at about 96 percent with shortfalls in explosive detection, less-than-lethal kits, and mobility bags totaling approximately $16M, a reduction of $100M over last year.

Security Forces (SF) require outfitting with the most modern equipment available due to their extremely high operations tempo, air expeditionary force deployments, and DSCA missions. 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 procurement of 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 significantly improve 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 ANG SF is not equipped to effectively respond with less-than-lethal force to any given scenario, creating a liability and putting the safety of ANG Airmen at risk. AF instructions for using force mandate options for less-than-lethal actions short of using lethal force. Lack of less-than-lethal capabilities and equipment greatly hinders our SF ability to secure an area effectively, particularly when performing DSCA missions, without resorting to lethal force. Additional capabilities for taking less-than-lethal action would align ANG SF with its AC counterparts. ANG SF currently has an $8M shortfall for 150 less-than-lethal force kits.

SF Airmen deploy at more frequent rates and for extended periods compared to most other Airmen, which causes more rapid degradation of equipment in SF mobility bags. ANG SF forecast a shortfall of approximately $3M for replacement and sustainment

The identified shortages are limiting the ANG SF ability to concurrently provide the public safety and security at home station, during overseas contingencies and when performing DSCA missions. These shortages have been identified previously, 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 fill rate for communications equipment is approximately 100 percent. However, there are several systems essential to operations that are operating in a degraded state, have exceeded their economically useful life, or have not kept pace with the technological advancements, causing this equipment to become questionable for both national defense and DSCA missions. Additionally, due to national defense and DSCA needs, the ANG continues to require sustaining communications equipment interoperable with civil authorities that are compliant with the National Incident Management System. These important communications systems have been assigned a lower priority for replacement and sustainment, which may affect support to DoD and state command authorities. 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

Overall, the ANG has adequate dual-use equipment for both the national defense and DSCA missions. However, there are equipment shortfalls in areas that are key to supporting state operations. 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. Additionally, classic associations following the Total Force Enterprise construct have the potential for slowing a state's response to natural disasters and other events because ANG units in a particular state do not possess the equipment but use equipment for training owned and possessed by the AC. To utilize equipment for an operation under state control, a governor must first seek DoD approval to utilize DoD equipment necessary for the operation. To support civil authorities in a timely manner, governors need agreements for more timely access to AC equipment in classic associate units, or have separate accountability, thereby making equipment owned and operated by the ANG available for a domestic response as it is at traditional ANG units.

Other shortfalls in support equipment and vehicles are caused primarily by assignment of new missions and changes to missions, such as units flying remotely piloted aircraft, expansion of missions for C-130 units, and accession of new aircraft, such as the KC-46. However, the ANG will eventually realize an increase in the ANG equipment inventory from these changes, which will lead to improved capability to train on mission-essential equipment used for both national defense and DSCA missions.

Additionally, planned insertions of technology and upgrades to ANG's current weapon systems require additional test equipment for the maintenance community, which evaluates upgrades or, in some cases, performs the upgrades.

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

c. ANG Requirements and Acquisition Strategies

The ANG acquisition strategy is focused on peacetime and wartime readiness capability requirements and ensuring support considerations are an integral part of an assessment of life-cycle costs of any procurement. Gaps in capabilities critical to wartime and peacetime needs are identified and vetted in an open and rigorous forum of warfighters, who are experts in their respective weapons systems or fields. One venue is the annual Weapons and Tactics Conference and its results are approved by the Director, ANG. A similar process is conducted at the annual JDOERs conference, which will be held in April 2014. The capability requirements derived and vetted at these conferences are translated into specific COTS or GOTS solutions, and require only non-developmental integration into a weapons system. These capabilities and associated programs are documented in the annual *Air National Guard Weapons Systems Modernization Priorities* book and JDOERs book.

Once valid DoD requirements are established, they are filled based on the mission priority of the unit and weapon system. The ANG uses all available funding sources to fill equipment needs. Most funding comes 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 personal protective equipment, communications equipment, and some vehicles. The ANG has also been aggressive in seeking other funding sources to replace items that have been expended while performing national defense and DSCA missions. Lastly, the ANG takes full advantage of NGREA funding to procure authorized dual-use support equipment, which increases a unit's ability to support state missions, or to modernize equipment to ensure its reliability, relevancy, and responsiveness to future national defense or DSCA 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 and modernization of specialized vehicles. 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 mission critical equipment 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 lifesaving 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. During FY 2013, Optically Stimulated Luminescence (OSL) dosimeters and readers were fielded to the HRFs and CERFPs concurrent with USNORTHCOM adopting OSL technology.

b. Effects of Shortfalls of Specialized Equipment

The WMD-CST and CERFP equipment issues are limiting factors, with no specific effects unless personnel protection (Occupational Safety and Health Administration, National Institute for Occupational Safety and Health, National Fire Protection Association) and hazardous material protection standards change or equipment failure occurs.

While HRF and CERFP missions have not changed, some equipment items were replaced or upgraded to ensure maximum capability for CBRN medical response. The ANG Consolidated Storage and Deployment Centers (CSDCs) located in Topeka, Kansas; Horsham, Pennsylvania; and Fairchild AFB, Washington, provide logistical support and a growing capability to provide preventative maintenance on equipment for the 10 HRF and 17 CERFP units. The CSDCs provide limited calibration of CERFP medical equipment, and deploy Expeditionary Medical

Support assemblages and HRF/CERFP medical resupply assemblages. Currently, the CSDCs do not have dedicated fork-lift capability in their warehouses to support the rapid deployment of medical supplies, but must rely on support from the local Logistics Readiness Squadrons. This dependence could potentially delay critical logistical support to a lifesaving DSCA mission.

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 the 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 guidelines for crafting the RC President's Budget exhibits. The AF and ANG are tying into several Air Force systems to attain the transparency required by FY 2008 NDAA, Section 1826.

a. Asset Marking and Tracking (AMT)

Consistent marking and tracking of assets supports Air Force logistics planning by enabling the asset visibility needed to effectively manage supply, repair, and demand planning across the Air Force. AMT enables total asset visibility by providing the ability to view inventory, whether static or in motion and link to asset quality and condition information. This is accomplished by creating a timely and consistent way to automatically identify and track assets throughout the Air Force supply chain.

b. Equipment and Vehicles Transformation Initiative (EVTI)

EVTI will enable the Air Force centralized management of Class of Supply VII (support equipment and vehicles). To work collaboratively toward the goal of enterprise management for Class of Supply VII, EVTI will group the following five process owners: Headquarters Air Force, Lead Command Equipment Management Office, Major Command Vehicle Fleet Management offices, Air Logistics Centers, and the Air Force Global Logistic Support Center. Specifically, EVTI will focus its efforts on the centralized management of support equipment and vehicle commodities to exercise planning, aggregation, and execution authority over Class of Supply VII.

c. Logistics, Installations, and Mission Support–Enterprise View (LIMS-EV)

The LIMS-EV is the Air Force's gateway and foundation for the warfighter to meet strategic, operational, tactical, and historical information needs of the 21st century Air Force. The LIMS-EV domains are diverse and complex entities. They encompass the maintenance of aerospace equipment, supply chain management, civil engineering, and force security.

3. Procurement Transparency and Certification

The National Guard continues to implement mission and programmatic changes to meet transparency requirements through focused leadership, equipping strategies, and modernization. The RCs have transitioned from a strategic reserve to an operational force while sustaining their HD, DSCA, and state 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, has 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.

In recent years, the Military 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, offers 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.

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Appendix D
Acronym Glossary

Acronym	Nomenclature
AAO	Approved Acquisition Objective (Marine Corps)
AAO	Army Acquisition Objective
ABCT	Armor Brigade Combat Team
AC	Active Component(s)
ACADA	Automatic Chemical Agent Detector Alarm
ACC	Air Combat Command
ACS	Agile Combat Support
ACV	Amphibious Combat Vehicle
ADAM	Air Defense Airspace Management System
ADOS	active duty operational support
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
AFR	Air Force Reserve
AFRC	Air Force Reserve Command
AFSOC	Air Force Special Operations Command
AGR	Active Guard and Reserve
AGSE	aviation ground support equipment
AIFF	advanced identification, friend or foe
AIP	antisurface warfare improvement program
AM	amplitude modulation
AMC	Air Mobility Command (Air Force)
AMCM	airborne mine countermeasures
AMD	Air and Missile Defense
AMDPCS	AMD Planning and Control System
AMP	Avionics Modernization Program
AMRAAM	advanced medium-range air-to-air missile
AMT	Asset Marking and Tracking
ANG	Air National Guard
AOC	air and space operations center
AOR	area of responsibility
AOU	Avionics Obsolescence Upgrade
AR	Army Reserve
ARB	Air Reserve Base
ARFORGEN	Army Force Generation
ARG	amphibious ready group
ARI	Automatic Reset Induction
ARNG	Army National Guard
ARS	Air Reserve Station (Air Force)
ASW	antisubmarine warfare
AT	annual training
ATM	Air Traffic Management
ATP	advanced targeting pod

Acronym	Nomenclature
ATP-SE	Advanced Targeting Pod-Sensor Enhanced
AVLB	Armored Vehicle Launched Bridge
BA	Battlefield Airman
BAO	Battlefield Airman Operations
BCT	brigade combat team
BLOS	beyond line-of-sight
BMUP	block modification upgrade program
BOL	back of launcher
BOS	Budget Operating System
BSERV	Bomb Squad Emergency Response Vehicle
BUMED	Bureau of Medicine and Surgery
C2	command and control
C2CRE-Bravo	C2 CBRN Response Element-Bravo
C4	command, control, communications, and computer
CA	civil affairs
CAF	combat air forces
CART	cargo afloat rig team
CBDP	Chemical and Biological Defense Program
CBPS	chemical/biological protective shelter
CBRN	chemical, biological, radiological, and nuclear
CBRNE	chemical, biological, radiological, nuclear, and high-yield explosives
CCDR	combatant commander
CCIR	Cyberspace and Critical Infrastructure Range
CDU	Critical Dual Use
CERFP	CBRNE Emergency Response Force Package
CG	Coast Guard
CGR	Coast Guard Reserve
CHINFO	Chief of Navy Information
CLS	Contracted Logistics Support
CNGB	Chief, National Guard Bureau
CNO	Chief of Naval Operations
CNR	Chief of Navy Reserve
CNS	Communication, Navigation, Surveillance
COCOM	combatant command
CONUS	continental United States
CORE	Concept of Reserve Employment
COTS	commercial off–the-shelf
CRC	control and reporting center
CRE	CBRN Response Enterprise
CRF	Coastal Riverine Force
CS	combat support
CSAF	Chief of Staff, United States Air Force
CSDC	Consolidated Storage and Deployment Center
CSS	combat service support
CST	Civil Support Team
CW	cyber warfare
DARPL	Dynamic Army Resourcing Priorities List
DART	Domestic All-Hazards Response Team

Acronym	Nomenclature
DCC	DART Coordination Cells
DCGS	distributed common ground system(s)
DET	Displaced Equipment Training
DHS	Department of Homeland Security
DMO	Distributed Mission Operations
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DOER	Domestic Operations Equipment Requirements
DON	Department of the Navy
D-RAPCON	Deployable Radar Approach Control (RAPCON)
DSCA	Defense Support of Civil Authorities
DSG	Defense Strategic Guidance
EA	electronic attack
ECU	environmental control unit
EMEDS	expeditionary medical support
EMF	expeditionary medical facility
EO	electro-optical
EOD	explosive ordnance disposal
EOH	equipment on-hand
EPAWSS	Eagle Passive Active Warning and Survivability System
EPCS	Electronic Propeller Control System
ESA	Enhanced Situational Awareness
ETR	Equipment Transparency Report
EVTI	Equipment and Vehicles Transformation Initiative
EXPCOMBATCAM	Expeditionary Combat Camera
FAA	Federal Aviation Administration
FABS	Fly-Away Broadcast System
FAWPSS	Forward Area Water Point Supply System
FEMA	Federal Emergency Management Agency
FFG	guided-missile frigate
FLSW	Fleet Logistics Support Wing
FM	frequency modulation
FMT	Full Mission Trainer
FMTV	Family of Medium Tactical Vehicles
FRP	Fleet Response Plan
FRS	Fleet Replacement Squadron
FSRG	Force Structure Review Group
FTD	field training detachment (Air Force)
FTD	Flight Training Device (Marine Corps)
FTM	full-time manning
FTS	full-time support
FTU	formal training unit
FY	fiscal year
FYDP	Future Years Defense Program
G/ATOR	Ground/Air Task Oriented Radar
G4	Generation Four (LITENING)
GA	Guardian Angel

Acronym	Nomenclature
GCC	geographic combatant commanders
GCSS-A	Global Combat Support System-Army
GFMAP	Global Force Management Allocation Plan
GOSC	General Officer Steering Committee
GOTS	government off–the-shelf
GPS	Global Positioning System
HD	homeland defense
HEMTT	heavy expanded mobility tactical truck
HH	Hospital Helicopter
HIPPO	Load Handling System Compatible Water Tank Rack
HITS	Home-station Instrumentation Training System
HM	helicopter mine countermeasures squadron (Navy)
HMIT	helmet-mounted integrated targeting
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
IAP	International Airport
IDA	Institute for Defense Analyses
IDT	inactive duty training
IEW	intelligence and electronic warfare
IP	Internet protocol
IPT	Integrated Product Team
IR	infrared
ISR	intelligence, surveillance, and reconnaissance
IUID	Item Unique Identification
JCAD	Joint Chemical Agent Detector
JCR-BFT	Joint Capabilities Release–Blue Force Tracker
JDOER	Joint Domestic Operations Equipment Requirements
JHMCS	joint helmet-mounted cueing system
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
kW	kilowatt
LAIRCM	Large Aircraft Infrared Countermeasures
LARS	Lightweight Airborne Radio System
LAV	light armored vehicle
lb	pound
LCM	landing craft mechanized

Acronym	Nomenclature
LCS	littoral combat ship
LCU	landing craft utility
LIMS-EV	Logistics, Installations, and Mission Support–Enterprise View
LMTV	Light Medium Tactical Vehicle
LSRS	littoral surveillance radar system
LTV	Light Tactical Vehicle
LUH	Light Utility Helicopter
LVC	Live, Virtual, Constructive
LVC/G	Live, Virtual, Constructive, and Gaming
MAF	mobility air forces
MAFFS	Modular Airborne Fire Fighting System
MAGTF	Marine air-ground task force
MARCORSYSCOM	Marine Corps Systems Command
MARFORRES	Marine Forces Reserve
MASS	Modular Aerial Spray System (Air Force)
MAST	mobile ashore support terminal
MATS	Multiple Amputee Training Simulator
MCTUAS	Marine Corps Tactical Unmanned Aircraft System
MEDEVAC	medical evacuation
MEU	Marine expeditionary unit
MFGI	Mobilization Force Generation Installation
MH	multimission helicopter
MISO	military information support operations
MMPV	Medium Mine Protected Vehicle
MPFUB	Maritime Prepositioning Force Utility Boats
MPRA	maritime patrol and reconnaissance aircraft
MSC	Military Sealift Command
MSST	maritime safety and security team
MSU	mobile support unit
MTOE	modified table of organization and equipment
MTRCS	Multi-Temperature Refrigerated Container System
MTT	Multi-Task Trainer (Air Force)
MTV	Medium Tactical Vehicle
NAS	naval air station
NATO	North Atlantic Treaty Organization
NAVELSG	Navy Expeditionary Logistics Support Group
NBC	nuclear, biological, and chemical
NBCRV	NBC Reconnaissance Vehicle
NCF	naval construction force
NDAA	National Defense Authorization Act
NECC	Navy Expeditionary Combat Command
NEIC	Navy Expeditionary Intelligence Command
NEPLO	Navy emergency preparedness liaison officer
NET	New Equipment Training
NG	National Guard
NGB	National Guard Bureau
NGREA	National Guard and Reserve Equipment Appropriation
NGRER	National Guard and Reserve Equipment Report
NGRF	National Guard Reaction Force

Acronym	Nomenclature
NIPRNET	Nonsecure Internet Protocol Router Network
NSW	naval special warfare
NSWG	naval special warfare group
NUFEA	Navy-unique fleet-essential airlift
O&M	Operation and Maintenance
OASD/RA	Office of the Assistant Secretary of Defense for Reserve Affairs
OCCM	on-condition cyclic maintenance
OCO	overseas contingency operations
OEF	Operation Enduring Freedom
OPNAV	Office of the Chief of Naval Operations
OSL	optically stimulated luminescence
P-1R	Service Procurement Program - Reserve
PB	President's Budget
PDTE	Pre-deployment Training Equipment
PIRL	Prioritized Integrated Requirements List
PLS	palletized load system
PPE	personal protective equipment
PQAS-E	Petroleum Quality Analysis System–Enhanced
PSU	port security unit
RAID	Redeployment Assistance and Inspection Detachment
RAMZ	rigged alternate method zodiac
RAPCON	Radar Approach Control
RB-S	Response Boat-Small
RC	Reserve Component(s)
RFRS	Reserve Force Readiness System
RPA	remotely piloted aircraft
RSSC	radar-sonar surveillance center
RTIC	Real Time Information in the Cockpit
RWR	radar warning receiver
SABIR	Special Airborne Mission Installation and Response
SADL	situational awareness data link
SAF/AQX	Deputy Assistant Secretary of the Air Force for Acquisition Integration
SAMS	Special Operations Forces Air Mission Suite
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
SIGINT	signals intelligence
SIPRNET	Secret Internet Protocol Router Network
SLEP	service life extension program
SLOS	secure line-of-sight
SMFCD	smart multi-function color display
SMTC	Special Missions Training Center
SOC	squadron operations center

Acronym	Nomenclature
SOF	special operations forces
SPAWAR	Space and Naval Warfare Systems Command
SPP	state partnership program
SSGN	guided-missile submarine (nuclear propulsion)
STUAS	Small Tactical Unmanned Aircraft System
SWCC	special warfare combatant-craft crewman
T/A	Training Allowance (Marine Corps)
TA	Table of Allowances (Air Force)
TCV	Total Containment Vessel
TDA	Table of Distribution and Allowances (Army)
TDL	tactical data link
TO&E	table of organization and equipment (Marine Corps)
TOA	table of allowance (Navy)
TPE	Theater Provided Equipment
TPSB	transportable port security boat
TSW	Tactical Support Wing
TWV	tactical wheeled vehicle
U.S.	United States
U.S.C.	United States Code
UAS	unmanned aircraft system
UH	Utility Helicopter
UHF	ultrahigh frequency
USAR	United States Army Reserve
USCENTCOM	United States Central Command
USCG	United States Coast Guard
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
USSOUTHCOM	United States Southern Command
VAQ	tactical electronic warfare squadron (Navy)
VAW	Navy Carrier Airborne Early Warning Squadron
VHF	very high frequency
VIP	very important person
VP	patrol squadron (Navy)
VR	Fleet Logistics Support Squadron
VTUAV	vertical takeoff and landing tactical unmanned aircraft system
WIN-T	Warfighter Information Network-Tactical
WMD	weapons of mass destruction
WMD-CST	Weapons of Mass Destruction Civil Support Team
WR-ALC	Warner Robins Air Logistics Center
WRMS	war reserve materiel stock
WST	Weapons System Trainer