[H.A.S.C. No. 109–14]

HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2006

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED NINTH CONGRESS

FIRST SESSION

READINESS SUBCOMMITTEE HEARING

ON

MILITARY SERVICES' REQUIREMENT ON RECONSTITUTION OF EQUIPMENT

HEARING HELD
APRIL 6, 2005

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FISCAL YEAR 2006 NATIONAL DEFENSE AUTHORIZATION ACT—MILITARY SERVICES' REQUIREMENT ON RECONSTITUTION OF EQUIPMENT

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
READINESS, SUBCOMMITTEE,
Washington, DC, Wednesday, April 6, 2005.

The subcommittee met, pursuant to call, at 2:08 p.m. in room 2118, Rayburn House Office Building, Hon. Joel Hefley (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. JOEL HEFLEY, A REPRESENTATIVE FROM COLORADO, CHAIRMAN, READINESS SUBCOMMITTEE

Mr. HEFLEY. The committee will come to order, and please be seated, gentlemen.

I apologize, first of all, for being a little tardy here. I was in the Terrorism Subcommittee hearing dealing with a subject that was very important to me. So I just am running a little late, and I hate to do that.

I want to welcome you to this afternoon's subcommittee hearing on resetting or reconstitution of military equipment returning from Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF).

This is the subcommittee's second hearing on this topic; the first was held in October of 2003. Much of the testimony at that time indicated that there was not enough information yet to determine the cost of reset. Today, we do know more. Through emergency supplemental funding, the military services have received approximately $9 billion for reset cost. The fiscal year 2005 emergency supplemental has a request for approximately $9.8 billion for reset requirements. Although these figures are large, there are more bills to come. We will most likely see those bills in a fiscal year 2006 emergency supplemental.

A structured reset program requires time, facilities, spare parts, trained workers, contractors, forward deployed maintenance workers and full funding that includes both operation and maintenance of procurement dollars. It is not clear to me if the reset programs are fully funded. I have asked the director of the Congressional Budget Office to be present today in order to decipher the different methods that can be used to calculate reset costs. Reset is a priority and a must-pay bill. Congress must understand how each of the services has determined the size of the bill and managing implementation.

I also intend to explore today to what extent factors other than money limit reset. Do we have the spare parts? Are there adequate facilities both at home and in the theater? And the most challenging factor, time; how much time will it take?

Not surprisingly the Army and Marine Corps have the most significant challenges. The current operational tempo (OPTEMPO), combined with the aging fleet and significant combat losses challenge the Army and the Marine Corps ability to sustain operational availability. I expect to learn today what actions the Army and the Marine Corps are taking to meet this challenge.

I would like to gain a better understanding of the difference between reset and recap, two important programs in the Army. I would also like to better understand the Marines cross-leveling of equipment as a means to make up equipment shortfalls.

I would like to now turn to Mr. Ortiz, the Ranking Member, to see if he has any opening remarks.

Mr. Ortiz.

[The prepared statement of Mr. Hefley can be found in the Appendix on page 31.]

STATEMENT OF HON. SOLOMON P. ORTIZ, A REPRESENTATIVE FROM TEXAS, RANKING MEMBER, READINESS SUBCOMMITTEE

Mr. ORTIZ. Thank you, Mr. Chairman. I join you in welcoming our distinguished witnesses, and I look forward to hearing the testimony on this important readiness issue.

Before I begin, I would like to first express my thanks and appreciation to our military personnel for all the sacrifices they make in providing for our defense.

I would like also to recognize the support of the many dedicated government service civilians and private individuals who work hard to help maintain the readiness of our armed forces. We cannot fight and win without them, and I thank them for their dedicated service to our national defense.

Mr. Chairman, our armed forces have been engaged in combat operations for over three years now, and the stress of this continuous combat is clearly evident on our military's equipment. Increased usage rates, environmental conditions and heavier armor are wearing out our ground and air equipment as much as five times faster than peacetime. This problem is only made more difficult by the Department of Defense's (DOD) requirement to reconfigure equipment to meet its goals of transformation.

While I have been pleased to see the effort that the service has put into meeting these challenges, I am very concerned by the growing backlog of expenses that have not been requested by the Department's fiscal year 2006 budget for the supplemental budget request. By Congressional Budget Office's (CBO) estimates, this growing mountain of worn-out equipment could cost as much as $18 billion to repair or replace. This is an enormous shortfall, and surely it will have an effect on our ability to respond to continuances in the future.

I hope the officers on our panel today, who have the very difficult job of managing this emerging problem, will be able to explain to you how they plan to overcome this funding shortfall.

One final point I would like to make before I close this about the defense: Our defense industrial base, the depots that repair all of this damaged and worn-out equipment are carrying a tremendous workload. At this point, I see little surge capacity remaining in our depots to meet emerging requirements.

The current conflicts have demonstrated that we must have the ability to surge our industrial base and sustain that rate over the long term. I hope our witnesses will take this opportunity to comment on the defense industrial base and how they plan to ensure our depots are strong and fully equipped to meet the needs of our troops in the field.

I, again, welcome our witnesses, and I thank you for your courage. Thank you, sir.

[The prepared statement of Mr. Ortiz can be found in the Appendix on page 36.]

Mr. HEFLEY. Thank you very much, Mr. Ortiz.

Let me introduce the witnesses and ask any of them if you have an opening statement and if you would like to summarize that.

Without objection, all witnesses' written statements will be made a part of the record.

First is Lieutenant General C.V. Christianson, Deputy Chief of Staff, G–4, United States Army. Second is Lieutenant General Jan Huly, Deputy Commandant for Plans, Policies and Operations of the Marine Corps. Third is Lieutenant General Donald Wetekam, Deputy Chief of Staff Installation of Logistics, United States Air Force. Fourth is Rear Admiral Mark Hugel, Deputy Director of Fleet Readiness Division of the United States Navy. And finally, Mr. Douglas Holtz-Eakin, Director of the Congressional Budget Office.

Lieutenant Christianson, are you the kick-off guy here?

STATEMENT OF LT. GEN. CLAUDE V. CHRISTIANSON, DEPUTY CHIEF OF STAFF, G–4, U.S. ARMY

General CHRISTIANSON. Yes, sir.

Thank you, Mr. Chairman, Ranking Member Ortiz, distinguished members of the committee. Thanks for the opportunity to appear before you today to talk about the work we are doing to reconstitute our Army's equipment.

Fundamental to our Army's ability to meet future threats is the absolute requirement that we rapidly return our equipment to an effective level of readiness upon return from operational employment.

Over the past 3 years, the Army has deployed over 40 percent of its equipment to Operations Iraqi and Enduring Freedom. Currently, we have about 15 percent of our equipment in the forward area. The increased operating tempo of our deployed equipment, combined with the harsh environment and an aging fleet plus significant combat losses challenges us to sustain readiness at the tip of the spear.

As an example, Army helicopters experience usage rates roughly twice their peacetime rates. Tanks and other track vehicles are being used at roughly five times their peacetime rates, and our truck fleet is operating at three to five times what we would consider normal peacetime rates. This readiness challenge can only be

met with a structured, formal, fully-funded program to reset the equipment when it returns from the operational area, complimented by a long-term program to ensure we can sustain the readiness of our systems over their entire lives.

We feel we have developed a comprehensive approach to providing our forces with ready and capable equipment. Even in the midst of this conflict, our approach ensures that, first of all, the forward commanders have the combat power they need, while minimizing the load on the strategic transportation system. Second, that returning units will be rapidly returned to an operationally ready condition, prepared for whatever mission comes their way. Third, as we are able to draw down our forward forces, that we can reset that equipment that we have kept in the operational area. Fourth, that our Army prepositioned stocks (APS), our APS equipment, is brought back to readiness condition for its mission as soon as it is able to be redeployed. And last, that we have in place a long-term program to sustain the operational readiness of our all critical systems over their lives.

Mr. Chairman, on behalf of the soldiers, their families and our professional civilians, we greatly appreciate the support of the Congress, and especially this committee, in addressing our needs. Your support has given us a solid foundation upon which we are building a stronger, more relevant and ready force. We appreciate your support, and I look forward to answering your questions this afternoon. Thank you.

[The prepared statement of General Christianson can be found in the Appendix on page 41.]

Mr. HEFLEY. Thank you.

General Huly.

STATEMENT OF LT. GEN. JAN C. HULY, DEPUTY COMMANDANT FOR PLANS, POLICIES, AND OPERATIONS, U.S. MARINE CORPS

General HULY. Chairman Hefley, Congressman Ortiz, distinguished members of the committee, it is my privilege to report to you any actions taken to date to reset the Marine Corps as well as our future reconstitution efforts. These actions are critical to ensuring we are prepared to meet today's operational challenges while maintaining good stewardship of our Nation's treasure. I recognize that this is only possible with your continued support while we remain at war.

There are a myriad of programs ongoing to reconstitute the Marine Corps. Our forces preparing for combat and forward deployment are using their equipment three to six times higher than normal. This increases the cost of operations and maintenance beyond what was originally budgeted. Additionally, our gear is being damaged by enemy action and worn down in the harsh desert environment. These effects increase maintenance and create a toll that frequently renders economical repair not feasible after being used in Iraq and Afghanistan. Repairing, replacing and redistributing this equipment among units rotating in and out of theaters of operation are some of our highest priorities.

Our prepositioning programs have once again proven their strategic utility by helping to close rapidly and sustain reinforcements in combat. We are recovering from using these extensively for Op-

eration Iraqi Freedom, but we face some challenges, two of our three Maritime Prepositioning Squadrons (MPS) have been reconstituted and will complete a scheduled maintenance cycle in the next one to two years. Equipment and supplies from the third squadron have been downloaded and used for current requirements in Iraq. We are planning to reconstitute this squadron and our Norway prepositioned equipment as soon as possible, and have identified the replacement of our ground equipment as an area where our fiscal year 2005 supplemental request will be applied.

While our analysis of requirement costs continue, we are confident that our supplemental request, when combined with those additional items presented at the behest of the Congress, is what we need to continue to fight the global war on terror (GWOT) while continuing to modernize the force, where practical.

Added to supplemental funding requests, the Marine Corps is internally funding essential warfighting equipment through an urgent-needs process that allows us to fulfill requests and provide to marines and sailors rapidly the equipment they need to conduct combat mission in operations Enduring and Iraqi Freedom. This process of satisfying urgent requests is directly tied to lessons learned on the modern battlefield; enables us to bypass the normal development procurement process and aggressively pursue improved armor, counter-improvised explosive device (IED) equipment, medical packages, rifle and night-vision optics, and other important items that can be quickly placed in the hands of troops conducting operations.

In September 2004, in order to meet the current enduring challenges of the changing nature of the war, the Commandant improved numerous structural changes to our operational forces; bringing these improvements to fruition will require the continued support of this committee in supplemental and additional items as we begin the extensive phases of recruiting, equipping, building and training these additional marine units.

In closing, I would like to again thank the members of the committee for their continued support of the Marine Corps and for the opportunity to discuss our current readiness and its inextricable link to our resource requirements. Marines' accomplishments are a direct reflection of your continued support and commitment to maintaining our Nation's expeditionary warfighting capability. I look forward to answering your questions.

[The prepared statement of General Huly can be found in the Appendix on page 74.]

Mr. HEFLEY. General Wetekam.

STATEMENT OF LT. GEN. DONALD J. WETEKAM, DEPUTY CHIEF OF STAFF FOR INSTALLATIONS AND LOGISTICS, U.S. AIR FORCE

General WETEKAM. Chairman Hefley, Congressman Ortiz and distinguished members of the committee, I thank you for the opportunity to appear today.

It is my privilege to report on our reconstitution efforts, our successes in this area and our challenges for the future.

The Air Force is organized, trained and equipped to meet expeditionary commitments through our Air Expeditionary Force (AEF)

concept. We have sized our logistics support system to meet those AEF requirements, along with maintaining a surge capability. Our experiences to date in Operations Enduring Freedom and Iraqi Freedom have largely confirmed the fact that our logistics system is capable of meeting those requirements. We have experienced many successes throughout OEF and OIF. We have flown over 270,000 sorties, opened 36 bases and supported as many as 31,000 airmen within the Central Command area of responsibility. Our airmen have been busy and successful.

Of course these successes are not the result of internal Air Force efforts alone. Congressional help was and remains key to providing the funding necessary for protecting our forces, replenishing and replacing equipment lost in combat, and reconstituting critical capabilities.

No success comes without challenges, especially in a combat environment involving multiple locations worldwide. The cost of resetting the force continues to increase with each passing year of the global war on terrorism. As we face these challenges, we thank you for your continued support. I offer my written comments for the record and look forward to our discussion on this important topic.

[The prepared statement of General Wetekam can be found in the Appendix on page 65.]

Mr. HEFLEY. Admiral Hugel.

STATEMENT OF REAR ADM. MARK A. HUGEL, DEPUTY DIRECTOR, FLEET READINESS DIVISION, U.S. NAVY

Admiral HUGEL. Chairman Hefley, Congressman Ortiz, and distinguished members of this committee, thank you for the invitation to come and spend time discussing the reconstitution of our military equipment returning from Operations Iraqi Freedom and Enduring Freedom.

Through your support, the Navy has been able to repair and replace equipment utilized to support United States operations in theater and maintain the level of readiness forecasted by our budget programming models.

Before I address fleet reconstitution, I would like to share a snapshot of what our Navy is doing today. We currently have 93 ships and 38,000 sailors forward deployed worldwide in support of the global war on terror, including the Carl Vinson Carrier Strike Group and the Bonhomme Richard Expeditionary Strike Group.

The Navy Ashore component has proven critical to continuing ongoing and combined operations with extensive medical, construction and other combat support and combat service support to the Marine Corps and Army ground elements. In addition, we have recently participated in operation non-focused items (NFI) assistance, which provided sustained relief to South Asian tsunami victims, demonstrating our surge capability and the value of seabasing in both responsiveness and access.

Testimony today addresses three areas of fleet readiness. The first is maritime readiness, which covers the maintenance approach that we are applying to the increased wear on our ships and submarines involved in the global war on terror.

Our ship maintenance budget during this period reflects the proper balance of readiness which directly contributes to the combined power of our forward presence forces and our ability to surge assets as required by the fleet response plan. Due to the increased operational tempo associated with the global war on terror, we have been experiencing some increase in the war-related maintenance, and we have been successfully able to address those challenges through using supplemental funding. Similarly, in the aviation area, we have sufficient supplemental funds each fiscal year to fund equipment reconstitution for our aircraft supporting OIF and OEF. Our aviation and maritime depot maintenance programs have been able to fund and execute necessary maintenance and repair actions to provide a surge-ready force while maintaining the appropriate workload balance between public- and private-sector industrial base. Additionally, we are finding and implementing innovative process improvements to assure that our maintenance is being delivered effectively and efficiently.

Finally, my testimony addressing our success in reconstituting our naval ground forces, in particular our naval construction force, allowing continued level of sustained support for the Marine Corps and Army ground forces in Iraq, Kuwait and Afghanistan. Again, the financial support of the budget supplemental process allows the Navy to maintain our current readiness levels while still accomplishing the emerging wartime missions as they occur.

In closing, I would like to thank you for your continued support of our Navy. Your efforts have been critical in allowing the Navy to sustain an unprecedented level of current readiness and to be prepared to surge when called upon.

I would like to thank the committee for offering me this opportunity, and I stand ready to answer questions.

[The prepared statement of Admiral Hugel can be found in the Appendix on page 53.]

Mr. HEFLEY. Mr. Holtz-Eakin.

STATEMENT OF DOUGLAS HOLTZ-EAKIN, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Mr. HOLTZ-EAKIN. Mr. Chairman, Congressman Ortiz, and members of the committee, the Congressional Budget Office is pleased to have the chance to be here today to discuss the cost of additional equipment stress. As the committee is well aware, the United States has maintained a substantial force presence in Iraq and Afghanistan, and the result has been that many hundreds of thousands of pieces of equipment are in need of repair or replacement.

The heart of the CBO's work in this area is summarized in the chart which you have in front of you and which is on the poster, which shows our estimates of the cost of equipment stress in this area. As the written statement details, we take two approaches to estimating these costs. Given the absence of complete and comprehensive data, we take a top-down approach which broadly attempts to assess the additional costs by looking at faster depreciation due to higher operational tempo. And the second approach is a bottoms-up approach, which for each piece of equipment would directly measure costs associated with sustainment, restoration, recapitalization or replacement. But uncertainty is associated with

both approaches, but the results indicate that, for 2005, there is a range of $7 to $8 billion in additional costs associated with the higher operational tempo and that, over the window from 2003 to 2005, this higher cost ranges from somewhere in the vicinity of $18 to $21 billion. If one goes back over that period, as the statement provides the details for, we can see a range of $3 to $5 billion in funds dedicated to this task, and as a result, there is an accrued unpaid liability there of somewhere in the vicinity of $13 to $18 billion for excess costs in excess of funding.

The distribution of these costs across services is unequal. Because of the larger presence of the Army, about 60 percent of these costs are associated with Army equipment; 20 percent in our estimates are associated with Air Force aircraft; and the remaining 20 percent are split between the Navy and the Marine Corps, with the latter predominating.

The CBO's estimates are quite similar to those produced by the services themselves. Their estimate is about $13 billion, and the percentage distribution in cross services is similar as well.

Looking forward, to the extent that the United States maintains the same presence in these areas in fiscal year 2006 and assuming that the operational tempo is diminished somewhat next year, one could estimate that these costs will occur in the range of $6 to $7 billion for FY 2006.

Now I would close our remarks in emphasizing the uncertainty associated with these estimates. In either approach, the top-down or the bottom-up approach, our particular estimates could be either too high or too low. In the top-down approach, it could be the case that adding an additional intensive year of usage does not, in fact, mean that the lifetime has been reduced in proportion to that intensity. Maybe their peacetime rates are much lower than one would expect the equipment to be used at, or in the other direction, we could understate the cost by not directly factoring in the harsh conditions in which the equipment are operated.

More generally, under both approaches, an enormous amount of data is required to do it exactly right. In the absence of that data, we adopted an approach of trying to bracket the approach with two different analytic constructs and by using analogies where we did not have direct evidence on these costs.

We thank you for the chance to be here today and look forward to answering your questions.

[The prepared statement of Mr. Holtz-Eakin can be found in the Appendix on page 88.]

Mr. HEFLEY. Thank you very much.

We keep getting testimony that a lot of the equipment is going to be left over there, simply is not going to come back, and you testified to that here. Is that because of the level of use of the equipment or the harsh environment, or both? Is this equipment that, if it was here in the United States, would be repaired and put back into service? The Navy always operates in a harsh environment of salt water, and now we are operating on the ground in sand. Is that what is causing this? Or is it, you feel, that just bringing it back and then having to repair it and bring it up to standards would simply not be economic?

General CHRISTIANSON. There are really two reasons, Mr. Chairman, why we have decided to leave equipment in the area of responsibility (AOR).

First is that some of that equipment is special equipment, for example, all of the vehicles that had armor plating added to them we left over there so that we could maximize the level of force protection. In addition, there is some special communications gear. There is gear over there that we have put in the theater that allows us to detect explosives. There is gear in the theater that allows us to jam frequencies and do other kinds of things that we do not have a lot of, so we do not want to keep rotating it back and forth. So, primarily, we are leaving equipment there that gives the soldiers and the forward members of the military the kind of capabilities they need to execute the warfight.

The second reason that we would leave equipment over there is to take some of the load off the strategic distribution system. Instead of sending things back and forth, the more we can leave in theater, the easier it is for us to work on the strategic system; plus, it is more rapid for the people to transition from one unit to the next if a lot of the equipment stays there. So those are the two fundamental reasons.

The second part of your question is, do we intend to fix that? Absolutely, we do. We concur with the CBO findings that there is a workload out there that we have not yet identified because we do not know when it is going to come back. But when it does come back, we will put it through the same process that we are doing for the equipment that is coming back with the units today.

General HULY. Sir, in the Marine Corps, we have those same concerns with the equipment, and the same rationale added to those. We believe we are saving in transportation costs by not bringing some of the equipment back, even though we possibly could, but to just leave it in place over there and then just redistribute what we need within the Continental United States (CONUS).

Some of the equipment over there is one of a kind, so it just makes sense to leave it there and get the maximum use out of it, and we replace it only as necessary. And some of the equipment is just not worth the effort to bring it back; it is in such a shape of disrepair that it just makes sense to leave it there.

Mr. HEFLEY. Mr. Ortiz.

Mr. ORTIZ. At what point do you know that some of this equipment that you just cannot bring back has to be replaced and buy new equipment? And the period of time that it takes to replace this equipment?

General CHRISTIANSON. Congressman, actually, we are finding out some of that right now. As units have come back with their equipment, there is a percentage of their equipment that cannot be repaired. It is just too costly to be repaired, and we have to replace it. In the cases where we have production lines going, you should see that come to you as a procurement requirement.

In those cases where we do not have any production capacity, where we are not making the item anymore. For example, the Bradley, you will see that come to you in recap requirements to

turn that chassis, that hull of a tank or a Bradley back into a new piece of equipment at the latest standards.

And we have some planning factors we use on how many are what we call wash out, in other words, how many are worn out so badly that they cannot be repaired and they need to be replaced. And I have some of those numbers here.

In the case of aviation, we are anticipating about three percent of our helicopters will never be replaced, they are just too beat up. Tracks, about two percent. But the biggest number is wheeled vehicles, and we estimate about 12 percent of our wheeled vehicles, when they come back, cannot be repaired and have to be replaced. So those are the planning factors we are using.

In terms of the timing of when they come back, that is a tough question because we rely on the forward commander to determine whether or not they need those capabilities forward. So in the case of up-armored humvees, I do not anticipate up-armored humvees coming back for a long, long time until our forestructure is drawn down to the point where we do not need as many as we do today. So that vehicle is going to be the last coming back. So it is a reset requirement that sits out there, as the CBO indicated. We just do not know when we are going to actually fix them, so it is very difficult for us to anticipate programming those dollars.

Admiral HUGEL. Sir, we have recently undertaken an initiative to establish repair and replacement facilities in theater. And as you probably know because you have been there, the operating forces get the equipment in their hands, they get comfortable with it, and by golly, they are going to use it. And it is just the case of having the one in your hand. It is a process for us to get them to evaluate that equipment, to turn it in, to get a new piece of gear, and then we evacuate that piece of equipment to a location, generally either in the rear with our foreservice support group in theater, or we evacuate it back to Kuwait, so we can get a good analysis of it. And I do not have to tell you because you have been there, but you have seen some of the equipment. It is just not equipment that you would want to bring back and operate with in the United States. Perhaps the turn signals might not work on it. Perhaps the speedometer does not work. It is just nothing that will ever prove worthwhile for us to repair and replace back here again, but it meets the purposes for over there, and it just makes good sense to keep it in theater for as long as we possibly can.

General WETEKAM. Sir, if I might for the Air Force.

Our situation is a little different. We do rotate most of our equipment. In terms of our aircraft, we do rotate those, and so they receive depot-level maintenance, et cetera, back here at their normal depots.

A lot of that is true also for our ground support equipment. The major exception are vehicles and some of our specialized mobility handling equipment. Even prior to 9/11, we had five War Reserve Material (WRM) sites established in theater with contract support, and so while we have had to plus up those contracts for support of additional equipment that we have put in theater, we do have in-theater support for a lot of that stuff.

Admiral HUGEL. Congressman, as you know, the Seabees we have on the ground have similar ground support equipment as our

Marine Corps brethren. We have folks there to do maintenance on that equipment on the ground. And as long as that equipment is economically feasible to maintain, then we are going to keep it maintained and bring it home with us when the time comes. When it is just not economically feasible to do the repairs anymore, then we will abandon it in place, but we do not see very much of that.

Mr. ORTIZ. I just have one more question, Mr. Chairman.

You know, given the current state of the equipment and the condition of the equipment, what would happen, God forbid, if there is an unforeseen crisis somewhere in the area? You know, we have Lebanon, Syria. We have Iran. We have Iraq. Some of the equipment is not worthy. Can we respond to another unforeseen crisis with what we have?

General HULY. Sir, for the Marine Corps, we have approximately 25 percent of our aviation assets of our total assets in the inventory, and about 30 percent of our ground equipment in Iraq and Afghanistan right now.

We have sufficient storage. We have two maritime prepositioned squadrons worth of equipment that we have not touched and we have fenced, so to speak. And they are forward deploy, one in the Mediterranean and one in the Pacific region, so that if we needed to respond to a crisis, we would have a maritime prepositioned squadron worth of equipment.

Added to that, we still have equipment with our organizations in the Continental United States that we are swapping around, cross-leveling to get back to the units as they rotate. So I believe that we have sufficient assets, more than sufficient assets, to be able to respond to a crisis.

Is it necessarily the equipment that we are going to want—that we are going to actually need in the next crisis? I will tell you, for instance, right now, we do not have a lot of up-armored vehicles, humvees, for instance, in the Continental United States because as fast as the industrial base can produce them, we are shipping them directly into the theater. If something were to break out that we needed armored humvees again in a different location, we would have to look at either another source of supply for those or actually sharing what we have elsewhere. But overall, I think we are in good shape to respond to any crisis that develops, that we certainly are anticipating might be a potential.

General CHRISTIANSON. As you know, we have prepositioned sets; we have a set in Korea that is pretty much land-bound in Korea if something were to happen there. We also had put, about two years ago, a Flotilla, a one-by-one brigade, aboard ship that has got some strategic flexibility and can move. So we do have some prepositioned assets.

And the 4th Infantry Division and the 101st are just finishing their reset coming back. If something were to happen and it was important enough, we would probably hold units in the current operation to use those organizations to respond if we had to.

So we have got about 15 percent of our combat equipment forward positioned in Iraq. The rest of it remains here. About a third of that is going to reset. The rest of it is ready to go. So there would be some difficult decisions, but we have the capability to respond.

Mr. ORTIZ. My time is up, thank you so much.

Mr. HEFLEY. Mr.Taylor.

Mr. TAYLOR. Thank you, Mr. Chairman.

First of all, I want to say I am honored that these gentlemen are here today. I regret that we could not have included the Guard and the Reserve because I think an important component that we are missing today is that the overwhelming preponderance of Guard and Reserve equipment that has gone to Iraq stayed in Iraq, and so we are looking at a portion of the problem, but the biggest portion, if you are looking for the problem, is what the Guard and Reserve left behind, and I think that is a fair assessment.

I would like to ask a few questions in particular of the Air Force. I am troubled by the Administration's acknowledged plan to terminate the C–130J program, particularly in light of every trip that I have taken to Iraq, it is pretty apparent that we are flying the wings off of the C–130's that are in the region. A lot of those are E models, I am told, and a lot of those the Air Force has already scheduled to retire at the end of this conflict. So I would like your thoughts on that, what is being taken to address that.

I would like to hear what your different Guard and Reserve components are telling you. I know the Marine Corps Reserve has been extremely active in Iraq, I know the Army Reserve and Army National Guard have been extremely active over there. I am sure you have called up the seabee reserve to serve over there, and so my hunch is that a lot of the equipment that was dedicated to them—and I know for a fact that, when the 90th Engineers came back to Mississippi after their tour in Iraq, they left every stick of equipment they had behind. So we have now been through a hurricane season that, thank goodness, did not hit Mississippi, but was only 60 miles away. The folks we were counting on their stateside mode to help reopen the roads and get electricity to the people and fix bridges; they did not have a stick of equipment last August and September when the hurricanes hit many parts of the states adjacent to us.

And last, I would like to turn this back to the Marines and the Army.

I am happy that this committee is doing, I think, a lot of work toward resolving the armored humvee problem; we still have a lot to do. Just last week, a couple of Mississippians were horribly injured, one losing two legs; but all present acknowledged that had it not been for the fully-armored humvee, that those two soldiers probably would have lost their lives.

It is something I should have seen myself, but thank goodness someone else was smart enough to point it out to me. Almost all of our vehicles in theater have flat bottoms. When a mine detonates underneath that flat bottom vehicle, it is much like a flat-bottom boat hitting a wave; the reaction is very severe. You are catching the full pressure of that detonation. It throws the vehicle up. In the case here, the humvee was thrown over 10 yards I am told.

I am told that in some parts of the world, and particularly the South Africans, in responding to the landmines that they were encountering during their wars, they went back and redesigned many of their urban fighting vehicles to have a V-bottom. Much like a V-

bottom boat, it slices and diffuses that force. In fact, I am told the Russians were probably very good at this and that most of the vehicles they used in Bosnia had a V-bottom. And when their vehicles would hit a landmine, it blew the tires off, but the people inside the vehicle walked away from it.

What is being done as we reconstitute to be a little bit smarter? And I have got to admit, I am one of the ones that fought very hard for the up-armored humvees, but maybe it is time to look beyond that to some sort of an urban fighting vehicle that incorporates a V-bottom so that we find ourselves with fewer young people that are in Walter Reed because of their legs blown off as a result of that flat bottom.

So I know it is three questions, the C–130J, sir, the talk about your Guard and Reserve equivalents and their equipment shortages, and what are we doing as far as looking at the next generation of fighting vehicles and responding to the landmine problem that we are encountering in Iraq?

General WETEKAM. Sir, if I may, I will start with the C–130J briefly.

The Department of Defense has indicated that we are going to review the production decision on the 130J within the Quadrennial Defense Review (QDR). The 130J is really part of a larger issue, and that is the theater lift issue, and what do we need and what is our current capability and what is our current fleet telling us?

The production termination decision was made almost coincidentally with the discovery that our C–130E and early age model fleet was not as robust as we thought it was. Essentially the problem with the center wing box that was discovered almost at the same time. And so what we are really doing is looking at the entire theater lift issue, the C–130 fleet as a whole. The 130J obviously has to be a part of that solution as we determine really what part of the 130E model and H model fleet are going to be available to us, what it takes to reconstitute that fleet. And so that will be—that is being looked at currently.

General HULY. Just for the record, so we do not get lost in the shuffle; the Marine Corps is also into the C–130Js. Our C–130J requirement and solution is different than the United States Air Force's. We received some 33, I believe, of the C–130Js out of a fleet of about 51 we were anticipating. Recent funding decisions got us cut off for the procurement of those last 18, but we think that that funding is being put back in so we can ultimately get our requirement of the C–130Js. But to us, the C–130J version that we are getting is a great aircraft, and we look forward to its service for many years in the future.

Mr. TAYLOR. General, to that point, I had the good fortune to meet one of your flight crews in Kuwait just last week, and they had been up most of the night refueling other planes. And he was extremely proud of the performance of the plane. What he did request—and I am going to pass this on to you—is the program to replace the fuel pods can be moved along, apparently they took the pods off some older models and stuck them on the newer planes. He felt like it was in the works. If there is anything this committee can do to move that along, I am asking for your thoughts on that.

General HULY. Sir, I am going to take that question for the record, and I will get back to you on that, to exactly what the status of that is. I know it is in the works, but I want to give you the exact scoop.

[The information referred to can be found in the Appendix beginning on page 136.]

General CHRISTIANSON. Sir, let me address first of all the equipment that we left behind, particularly for the Guard and the Reserve forces.

The Army has developed a force generation model of which will put our Reserve components of one in five or one in six years, and what the intent is that for one year out of that five or six year cycle they would be ready for deployment. The challenge we have right now, particularly with the Guard, is with their homeland security and their state missions, the suite of equipment they must have in their unit to do that mission you just mentioned for the Mississippi Guard, we have not yet identified this. We will identify that, and we will fill those units with that equipment. So even coming out of a deployment like the one we came out of now, we are obligated to provide the equipment to those organizations to execute those state missions. And then as they come into that one year window, then we give them all the equipment they need to execute their full-mission suite. That process was not in place when the first rotations came back, as you know. So most of the Guard and Reserve units, engineer in particular, transportation units in the Reserve had to leave almost all of their main equipment in country, and it is still there being used every day. So we have that challenge to address that.

Our intent is to handle the Guard, the Reserve and the active forces exactly the same. The rotational model is one in three years for active, one in five for the Army Reserve, and one in six for the National Guard. That is the intent. Now we did not get there right away with these forces, so we still have some work to do, but at the strategic level, we are going to maneuver the equipment to give the units the capability to be able to handle their mission sets.

General HULY. As far as the Reserve equipment for the Marine Corps goes, we are doing our best to cross-level once our Reserve levels get back; 95 percent of all of our Reserve units have seen combat in either Afghanistan or Iraq. And as they return, we are providing them with what equipment we have got and replacing the equipment that has been damaged or destroyed, looking for industrial base opportunities where that is needed. And we are also trying to, as you pointed out, be a little bit smart in what we are replacing in anticipation of our future requirements. We are looking for those opportunities and vehicles to get better armor on them, underneath armor. We have taken some of our humvees, as you know, and armored them up better on the bottom so that they can withstand a certain quantity of a landmine or an explosive charge placed underneath them. That does not get all of the support that we want under there, and we are looking forward to the next generation of vehicles, but have not decided on which one to procure yet.

Admiral HUGEL. Congressman, our active components are an integrated fighting force; we prepare the units and first units; we

marry those two up. Right now the equipment is in use. About half of the equipment is Reserve equipment; the other half is active equipment, but all of the equipment is being treated and maintained the same way, and it is as a result of this close integration of the reservists into our construction battalion (CB) battalion.

General CHRISTIANSON. And Congressman, if I could address the question of armor protection for our forces forward given the environment they are in, particularly in regard to the humvee and its flat bottom, really I think the vehicle of choice over there is the stryker, which does not have the same type of bottom and is much more protective for the forces, over 800 armored security vehicles—which is a special vehicle designed much like the South African vehicle you mentioned.

And third, we have purchased some of the sport utility vehicle (SUV) 31s from South Africa, and those who are the most exposed for this kind of damage are using those vehicles over there. So we have taken those vehicles right now, and we look to the future and what kind of land vehicle are we going to have. In the Army's case, the tactical truck system, how it looks is going to be driven much by what we learn here, and the last point that I would leave is still the vehicle that we are not going to go away from is the heavy armored vehicle, so we do not see any intent in the future that the Army is going to get rid of any tanks or Bradleys. But they all need to provide the level of force and protection that I think both you and I would like to have.

Mr. TAYLOR. Thank you, Mr. Chairman.

Mr. HEFLEY. Mr. Snyder.

Dr. SNYDER. Thank you, Mr. Chairman.

I want to pursue this a little bit about the Guard and Reserve forces, if I might. About a year and a half ago, when the 39th Brigade left Arkansas, I went out one of the days when they were loading up the equipment on rail cars, it was like the biggest use of rail and moving of equipment since World War II through Arkansas, and it was just rail car after rail car. And so they moved all that stuff with them. And now they have come back, and most of them are now back in Arkansas or Oklahoma.

So General Christianson, can you explain to me kind of the trail now that is going to happen in terms of if I am General Morrow in Arkansas and I am trying to figure out how to replace this equipment that is either worn out or some left behind, so who does the adjutant general go to? Does that come directly through you or—walk me through that, if you would, please.

General CHRISTIANSON. It is going to be a centrally controlled program. The Army Materiel Command effective 1 October this year will be completely in charge of this program. We will work directly with the Army National Guard, G–4, my equivalent on the Army Guard side, directly with the State maintenance officer and the units in the organization.

What the unit commander should expect is for the equipment they have brought back with them, it should go through the same reset program that all of the active forces have gone through, no difference. The timing may be different. Where it is done is going to be controlled by Army material command. So a lot of it is going to be done locally, but some of it will require repairs that will have

to go to the depot or will have to go to some kind of a higher level organization.

So our intent is to leverage the combat supplies management system (CSMS), the mates, all of the technical capability the Guard has, but to leverage all that in the context of a unified national program with a single standard. So no one is going to get something back at a lower standard that comes out of this program. That is our intent.

Dr. SNYDER. So requests from the Guard or the Army Reserve not come through you, or do they? They eventually get to you?

General CHRISTIANSON. Yes, sir. They will come to me from the National Guard, the bureau itself here in Washington, and then we will bring that all together. And then Army Material Command is kind of the coordinator of the national program who will ensure that all of this work is distributed right and that the standards have been—they obtain the same level of productivity and standards coming out.

Dr. SNYDER. I have not talked to the folks back home about this issue yet, but as you know, the concept of the enhanced brigades came up so we could take certain units and make sure they got the equipment they needed, and I think that probably has worked reasonably well, but these are the folks that did get some help with getting equipment several years ago, but they have now gone overseas. And I think there is some fear that perhaps now they will be behind getting that replaced. Is that a reasonable fear to have?

General CHRISTIANSON. The enhanced brigades are also going to be modularized as they go through this reset process. They will come out of this reset process looking different than they did when they went into this operation. They are going to look just like the Army modular brigade construct, it will be no different. If it is a heavy brigade. It will look the same as all other heavy brigades, so when it comes out of this process, as its equipment is reset, it will be issued the right kind of equipment to meet those requirements. I can take for the record the timeline to know when 39th is actually going through its modularity window because that will give you and the Adjutant General (AG) a picture, a window of when they should come out of this looking like the new organization.

Dr. SNYDER. That is all right. You do not need to take that for the record. I was using them as an example. Thank you.

Thank you, Mr. Chairman.

Mr. HEFLEY. Mr. Hayes.

Mr. HAYES. Thank you, Mr. Chairman.

General Wetekam, you referred earlier to the Quadrennial Defense Review. I want to ask you about the mobility capabilities study; very very much concerned about the issue of C–130's, we grounded a bunch of them at Pope. They had to move one of the 45th National Guard planes to back field. Does the Mobility Capability Study take into account the recapitalization and reconstitution issues that you mentioned in your testimony on page four?

General WETEKAM. Sir, it takes into account those issues to a degree, but it is not at the heart of the Mobility Capability Study (MCS).

What we expect out of the MCS—and of course, it is not produced yet—it is essentially a range, if you will, of forces that will be required, depending on the contingencies. I certainly share your concerns relative to the existing C–130J fleet.

In addition to Mobility Capability Study, Air Mobility Command and the program office, the C–130 program office, are working hard right now to assess what the data, the new data is really telling us with regards to the condition of the C–130's, the older 130's that have the center wing box problems you referred to, sir.

Mr. HAYES. Well, the data is telling us it is a bad problem. I think what you are going to find, when you look more closely, with the grounded birds and wing boxes, it is worse than we think, and we very badly need to get into spending money on the new Js.

And when you answered the question for Congressman Taylor, you mentioned a wing box. Did you say it is better or worse than we first thought, or did I misunderstand that?

General WETEKAM. It is worse than we first thought. We had initially established a limit at 45,000 equivalent baseline hours, at which we restricted—put flight restrictions on those aircraft, but continued to operate them. What we found out in recent months is that 45,000 equivalent baseline hours is the point at which we actually need to ground the aircraft, and we have moved that restriction limit back to 38,000. So it is worse than we thought it was until a few months ago when we got essentially new data as we have worked more with the center wing boxes. It is not getting better; it is going in the wrong direction.

Mr. HAYES. You are confirming what we had feared.

The MCS study was due at the end of March; now it comes out at the end of April. I am pretty sure we use that as another way of letting folks up here know what the situation is. At Pope, we have got 31 aircraft grounded, seven or eight limited flying status, 20 percent of the fleet, 84 of which are on active duty on restricted weight capabilities. We have just got to keep hammering the fact that recapitalization, that is keeping our young men off the ground in Iraq and Afghanistan and increasing safety.

Talk at length about the continued, not just procurement as it is now outlined—and hopefully, we have corrected the initial oversight in the budget for continuing production. Speak to that, and then speak to the issue of what really we need, and that is more C–130Js than was initially projected. And anyone else that would like to speak in the range of whoever uses them, I would love to have your comments for the record. We need those aircraft badly.

General WETEKAM. Yes, sir. Essentially, the production for the Marine Corps 130's is kind of bridging, if you will, the production gap until the department can fully assess the impact, as referred to earlier.

Mr. HAYES. There is a study underway, and I am sure you are probably aware of it, but I know there is a request, and that is, the amount of money that is being spent, we are way past the point of diminishing returns. We are spending money on aircraft that may fly for a limited amount of time; some that will never fly again. We need to transfer those tax dollars into new aircraft with availability and capabilities that are full time, not limited on

weight. So again, any comments on that? And I yield back my time after that answer.

General WETEKAM. Sir, I just say that I share your concerns with aging aircraft, 130's are a big part of that, but we have other fleets as well, as you are certainly aware, that are in the same boat. Our KC–135 fleet, which averages about 43 years of age——

Mr. HEFLEY. Do not lose focus. If we can get them on the C–130's, then obviously have answered on the 15s and the KC–135s and so on. You are right. Let's give the people some airplanes, you know?

General WETEKAM. Yes, sir.

Mr. HEFLEY. Dr. Schwarz.

Dr. SCHWARZ. General Wetekam, we are not picking on you, sir, but let's talk about A–10s. My understanding is that there are about 200 A–10s Guard, Reserve and Active left in the inventory; is that about correct?

General WETEKAM. Sir, I believe it is slightly higher than that. I can tell you in just a moment what the total number is.

We have a total, total inventory including trainers of 357 active and on-guard Reserve.

Dr. SCHWARZ. That is a lot better than I thought. The plan is to upgrade, refit, refurbish. What part of that fleet to keep them active and in the inventory, my understanding, until maybe the year 2018, 2020?

General WETEKAM. Sir, I will have to take that for the record and provide you an accurate assessment. We do have upgrade plans for the A–10, but I do need to be sure what portion of the fleet and what the projected service life is.

[The information referred to can be found in the Appendix beginning on page 136.]

Dr. SCHWARZ. I feel about the A–10 the way my friend Mr. Hayes feels about the C–130J. I have a vested interest in it. There is an A–10 base in my district, but that A–10 squadron has flown in every operation this country has been involved in for the past 15 or 18 years, including the first Gulf War, Kosovo, the southern no-fly zone, Iraqi Freedom, and they are a superb outfit.

Then I speak with my friends who are both retired and active officers in the Army and the Marine Corps. When you talk about plans the Air Force might have to take the A–10 out of the inventory and replace it with another close air support aircraft, they are unhappy campers.

So my interest is, and the assurance, that I want, if you can possibly give me, is that keeping the A–10's in the inventory active and in support of our Marine Corps and Army troops on the ground is—that is the plan, that is ongoing.

General WETEKAM. Yes, sir. We have long-term plans for the A–10. We will, as I said for the record, provide you with the detailed force structure laid out for the outyears. But we certainly share the Army and the Marine Corps' enthusiasm for the A–10 as well. It has been a great performer for us.

[The information referred to can be found in the Appendix beginning on page 136.]

Dr. SCHWARZ. Thank you very kindly, General. I would yield back my time right now. I have another question later.

Mr. HEFLEY. Mr. Reyes.

Mr. REYES. Thank you, gentlemen and thank you for being here.

The first question I have, on the occasions that I have had to visit in theater, we have been told various things about how fast the equipment is wearing out. Is it accurate that the equipment is wearing out five times faster than we anticipated because of the harsh environment?

General CHRISTIANSON. I am not sure that it is accurate that it is wearing out five times faster. I think it is accurate we are using it five times more than we would in peacetime operation, training operations. How much wear is being done kind of depends a little bit on the equipment.

As I mentioned earlier, with wheeled vehicles that we have added a lot of extra armor to, so it is carrying extra weight. I believe they are wearing out much faster.

What we are finding out on the aircraft—when we have come back for those aircraft that we have completely reset—that there is not as much wear as we thought. Part of that is because I believe our soldiers learned from Desert Storm and took actions as part of these operations to avoid some of the damages we saw on those helicopters during Desert Storm.

The same thing has been applied to some of our ground systems. We have better filtration systems. The maintenance checks and services the soldiers are doing forward, I think, have helped to help alleviate some of the wear. Not the usage.

The usage is five times higher than normal. But the wear depends on other things. As I mentioned, we are not seeing that in the stuff we are resetting right now, with the exception of wheeled vehicles, which I think are wearing out at a higher rate than our other equipment.

Mr. REYES. In that same vein, what are the lessons that we have learned? Is somebody in a position to not only evaluate but to make recommendations and maybe implement changes to either our logistics system or the design of the vehicles that are wearing much faster? What is being done in that area?

General CHRISTIANSON. Exactly what you said is what is happening. We are taking the lessons learned and applying them. The lessons learned after Desert Storm were applied primarily to aviation and paid huge dividends in this operation.

The aircraft that came back out of this last operation, as I mentioned, the wear and tear was much less than we thought. In addition, other lessons that are learned are being applied during the RESET. So if we are able to put improved capabilities on those helicopters, better screening systems for dust, better capabilities for cleaning. We are doing that as part of the RESET program.

Better training for the soldiers, what extra steps should you take in this kind of environment when you are operating? Those are also lessons that are being applied every day at the point of the sphere. So we are doing exactly that.

I think where we see the results is in the equipment forward. So even though the equipment is being used at a much higher rate than normal, we are seeing readiness rates that are 94, 95 percent almost across the fleet. With aviation, almost all of our aviation fleets are well above the Army standard in the deployed area de-

spite their high usage. So I think they are applying many of the lessons.

Mr. REYES. What about some of the information that we get that parts are taking a long time, vehicles are deadlined for parts and are down an inordinate amount of time.

What do you know about that? What are you doing about that and where are we today about that?

General CHRISTIANSON. In the two and a half years that we have been in operation over there, there have been significant changes to the way the supply distribution system works. As you know, there is—there are a lot of items that are moving by ground and it is a long ways, so we have used a lot of repair time, a lot of time just waiting for supplies to be delivered. But today I can report that for those items that are ordered and delivered by air, the turn-around time is 18 days on average over there.

The biggest problem we are having is the distribution locally, because when it gets up into Iraq and then gets out to the forward operating basis, those distribution runs are all made in coordination with all of the maneuver forces. They take into consideration the security environment, as you can well imagine.

But we are getting good turn-around times in supply. Eighteen days is very, very good. Now this is compared to almost twice as long a year and a half ago. So we are doing very, very well.

The other indication that the repair part situation is good is on aviation. We have very few helicopters that are down waiting for repair parts. We have about 10 percent of our helicopters that are in a phased maintenance. After so many hours, they bring them in for a phase maintenance. I think this is also indicative of a good supply system and lessons learned and applied in this operating environment. We are watching it every day. We watch the supply turn-around times every single day.

Mr. REYES. Are these—excuse me, go ahead, General.

General HULY. Sir, in the Marine Corps, perhaps in the early stages of the campaign, there might have been some supply problems or some delays. But I have heard of no reports of any recently and readiness rates don't bear out that they have got a problem.

Our readiness, like the Army's, is way into the 90 percent for our ground vehicles. So I think they have got the supplies. They have got the maintenance capabilities to keep things running. Our aviation rates over there as well remain high. This is because we do have the forward in store supplies and the maintenance effort over there.

Conversely, however, though, our maintenance on the CONUS-based aircraft is declining. It is declining at the expense, because we are putting the effort into keeping things forward deployed. That is where the emphasis is right now.

Mr. REYES. Mr. Chairman, can I ask one quick follow-up by way of documentation? I was going to ask, are there reports that can give us a comparison of how things were early on in this conflict versus where they are today? Could we get copies so we could take a look at them?

General CHRISTIANSON. Congressman, I will take that for the record, and I will give you some background. We track that all the time.

I wanted to add one thing that I forgot that is very important. In the last couple of years, one of the things, one of initiatives that we have taken that has paid huge dividends is we now have satellite connectivity to the very forward edge of the battlefield for logisticians.

So before where we take several days for a request for a repair part to get back here to the United States, today it is happening in less than half a day. That makes a huge difference in the ability to support the forces. Because now the people who are back here supporting are able to respond rapidly. The last point I would make is we also have a supply capability in Kuwait.

About 35 to 40 percent of the repair parts that are needed in Iraq are coming from that warehouse in Kuwait. So that shortens the supply pipeline significantly and helped us in turn-around time, but we will get you the information and you can see what happened.

[The information referred to can be found in the Appendix beginning on page 135.]

Mr. REYES. Thank you. Thank you, Mr. Chairman.

Mr. HEFLEY. Mr. Miller.

Mr. MILLER. Thank you, Mr. Chairman. I would like to go back to the C–130 question, and particularly the wing boxes. Can you, in particular, General, talk about how many aircraft are currently affected by wing box cracks? Given the rate that we have seen over the last year with the problem, can you forecast what we may run into this year? I ask all this to go to the point of the company or companies that produces the wing boxes, do they have the capacity? Are they producing fast enough to be able to replace what needs to be done so that we don't run into a crisis in regards to replacing those parts.

General WETEKAM. Yes, sir. First off, the first part of your question is we have—and these numbers change, because as we operate aircraft they obviously move into that over 38,000-hour category and then the over 45,000 or 45,000-hour base line category.

But my most current data is that we have 35 aircraft that are over 45,000 hours and so essentially are restricted from all operations at this point. In addition to that, there is another 56 aircraft, and this includes also C–130Hs, it is not just the E models, but some of the earlier H models. Fifty six aircraft that are in that restricted area where they can operate, but they have significant limitations on maneuvering and on carriage, weight carriage.

I will take for the record what our projection is for the next year. There are a number of aircraft obviously that will be moving into those categories, and I will take that for the record.

Relative to the production capacity, we think that it is about 36 per year, according to the manufacturer, 36 center wing boxes that could be produced. And so—but it is not just a case of producing the wing boxes, it is also a case of having the depot capacity then to replace the wing box. We couldn't do 36 simultaneously, and we are still assessing that.

So the wing box production capacity itself would seem to be adequate. But we haven't fully assessed what the depot capacity could be and how fast we could put those aircraft, particularly those 36

that are already in the—or the 35, rather, that are in the grounded category through the depot.

Mr. MILLER. Does the work actually have to be done at a depot. Can it be done privately?

General WETEKAM. Yes, sir. I say depot, but that could be either public sector depot. We do in C–130 work in both Ogden, Utah and Warner Robbins, Georgia. There are a number of private sector depots that do contract C–130 work and have in the past as well. I would suspect that it would be a combination of the two.

Mr. MILLER. I would hope, so because we have a facility in Crestview that does a lot of work. When I look at the numbers, I see that the private sector does—not that I am against depots at all, but it seems that they are turning out equipment faster within budget, and I want to make sure that we don't just force everything back into the depots to get the work done.

General WETEKAM. No, sir. In a situation like this, where we have an operational restriction, we would seek to repair it, you know, address it as quickly as we could, using whatever capacity is available.

Mr. MILLER. Very good. Thank you, sir.

Admiral, can we go to the water for just a minute.

Admiral HUGEL. Yes, sir.

Mr. MILLER. You may have addressed it before I got here. But talking about the Kennedy and the plans to retire the carrier does, this cause a capability issue as we reconstitute our forces? What happens when the Kitty Hawk comes home to be retrofitted, you know, during that period of time?

Admiral HUGEL. In the near term, Kennedy was already planned to be in a maintenance period, and so we had enough other carrier strike group capability in place to continue to supply our six plus two carrier strike group rate, and that is in accordance with the fleet strike plan.

We are looking now over the longer term to determine whether we will be able to continue supplying six plus two carrier strike group readiness or something less than that with Kennedy out of the mix.

A piece of that work is understanding the—not only the capability that we need to have deployed but the presence that we need to have. Those two things, coupled together, to make sure that we are meeting the combatant command (COCOM) requirements forward.

We are additionally looking at Kitty Hawk and the Kitty Hawk replacement. The plans are not finalized yet on replacing Kitty Hawk. So further study required there before we announce where we are going.

Mr. MILLER. You—I have heard the discussion, in regards, if I might, for just a second, Mr. Chairman. I know my time is out. In a 30-second nutshell, I have heard the term "mothball" used in regards to the Kennedy. What does that mean?

Admiral HUGEL. We have fundamentally two different kinds of things we do with a ship after we inactivate it, Congressman. One is to mothball the ship, basically to lay the ship up in a condition so that if we decide somewhere down the road we need to reactivate the ship, the systems have been dried out, the ship has been

dehumidified so that rust and the deterioration of the hull life components doesn't get away from us. The other alternative is to scrap the ship, to cut it up, and that is a pretty final action.

So mothballing or demobilizing the ship allows us to put the ship away, but to recover the ship if somewhere down the road we decide we need the ship back in the inventory.

Mr. MILLER. I understand when you—the reasoning, I guess, behind from a financial standpoint. But can you quasi-mothball something and turn it into a training carrier?

Admiral HUGEL. Quasi-mothballing means taking pieces of the ship completely out of action, sealing the compartments and locking it up. If we were to use a ship for a training asset you need to have access to the entire ship. If there is a flood in the ship, you need to get to wherever the problem might be, and so it is impractical to partially mothball a ship and continue to operate it, sir.

Mr. MILLER. Okay. I have got some other questions in that regard, but I will pass them too you.

Admiral HUGEL. Yes, sir.

Mr. HEFLEY. Mrs. Davis.

Ms. DAVIS. Thank you.

Thank you, Mr. Chairman, thank you to you all for being here, and for your service, and particularly to General Huly. We miss you, and miss your service in San Diego.

I wanted to turn just a second to what could be, I guess, the most personal of all readiness questions, having met with a group of Marines just a few days ago in San Diego, who were being treated at Balboa Hospital.

One of their big concerns was that their weapons jammed, and that even despite their cleaning the weapons constantly, that they still are having a lot of problems, it is hard to get a replacement, and they also mentioned that they would like to have a side arm available to them so that when their weapons jammed that they have a backup.

Could you tell me how you would respond to them when they make those requests, and what we are doing about that?

General HULY. Ma'am, this is the first that I have heard of any weapons jamming in combat or in any training leading it to it. If it is so, it hasn't been a problem that has been brought to our attention. I am sure if they are saying it happened to them, then we will check it out. So I am going to have to take your question for the record. I will find out which units specifically and to see what the problems were.

[The information referred to can be found in the Appendix beginning on page 137.]

Ms. DAVIS. Okay, I can help you with that. Thank you.

General HULY. Thank you.

Ms. DAVIS. And also I just wanted to ask then about the tracking of war-related expenses and equipment, do we do that separately or are all those war-related expenses tracked in one way and other military tracking expenditures are tracked another way. Do we separate those out or are they together?

General HULY. I can speak for the Marine Corps in that we are capturing all of our war-related expenses and our costs separately at this time from our normal operating costs. We had a very good

foundation of what our normal operating costs were preOIF and preOEF.

We were pretty much able to capture what our costs were, not only for our own information and managing internally, but to be able to present it to the Congress and to the Department of Defense to be able to justify what it is that we are asking for. So, yes, ma'am, we do break them out separately.

Ms. DAVIS. Is that true for all the services?

General CHRISTIANSON. Yes, ma'am. We have to track our expenses separately. I know that if an auditor came in to look they probably wouldn't think we are doing it as well as we should. But we are trying to keep them separate for many, many good reasons. We have to do that.

General WETEKAM. The true is for the Air Force as well, ma'am.

Admiral HUGEL. Yes, ma'am. Within the capability of our ability to distinguish an underway day for the war versus just being an underway for other reasons, we do try to distinguish those costs. Certainly we program in budget and predict with models that are tied to baseline requirements and then wartime requirements above that.

Ms. DAVIS. Because, I am glad to hear that then because there was some question of whether or not DOD allowed that, but that is the way that you do that.

It is my understanding that in 2004 the supplemental requested 2.8 billion addressed to equipment and wear and then 2005 supplemental was about 12 billion for that purpose. Now that we are in 2006, if we have a pretty good idea about what those amounts are, if you are separating them out, then why don't we include those from your point of view in the 2006 budget request, which will be separate from the supplemental?

General CHRISTIANSON. In accordance with the Office of the Secretary Defenses (OSD's) policy, the incremental costs of the war we put into the supplemental, the emergency supplemental request. The problem with trying to anticipate it, and we do the best we can when we build a supplemental requirement, is we are not exactly sure what is going to come back next year.

If the security situation changes up or down, the units that were returned or the units we will send over will not be the ones that we currently are planning. So we could get a lot more equipment back. So, for example, if a security situation improves dramatically over the next six to eight months by the end of this calendar year, we could see a lot more of the equipment we have left behind returning here.

If that happens, there will be a larger amount of RESET required next fiscal year than we are currently planning, because currently we know we are only planning for the units to come back that we think are going to come back.

So we are kind of in a little bit of a time crunch. I know, Mr. Chairman, you had asked earlier, what is the resource that really drives all of this? Time is the resource that we really don't have any control over. So we—if the budget goes in and it has to be in by this time, and we have—we don't know what force structures will remain in theater until after that time, we have no choice but to ask for it in a supplement.

Ms. DAVIS. Where do we factor in equipment for the Iraqi Army?

General CHRISTIANSON. Most of the equipment that I know—some of the equipment we have given the Iraqi Army. Some of our prepositioned trucks, for example, that are very old models that we don't want in the Army anymore. About 1,215 we gave to the Iraqi Army. We were compensated, recompensated from Coalition Provisional Authority (Iraq) (CPA) for that.

Most of the other stuff that I know is being purchased commercially and is not equipment that the Army, at least in the Army's case, the Army is not giving them. It is outside the Army.

Ms. DAVIS. Great. Thank you.

Admiral Hugel, I was going to ask you just about the sea swapping and what we anticipate down the road. We know there are a lot of plusses of that, certainly, but the downside in terms of readiness—and if we don't have any more time, Mr. Chairman, I will stop. But that was a question that perhaps others haven't asked about.

General HULY. Yes, ma'am, we have done sea swap pilots on the west, for a couple of West Coast ships now. We are embarking on sea swap pilots for ships based on the East Coast. We continue to learn from each of those sea swap exercises the upside and the downside, and there appear to be quite a few upside things.

So I think when the Chief of Naval Operations (CNO) testified earlier on what the future force structure requirements in terms of number of ships might be, he mentioned sea swap as an issue and an effort that we are going to continue to explore. Depending on our success at employing sea swap, depending on how much of the fleet we can do sea swap with, we will eventually dictate the size of the force that we need because of the extra forward deployed operational availability we get from those platforms when we are able to swap crews back and forth.

So far, we have learned many good lessons from sea swap. The East Coast ships will add to that collection.

Ms. DAVIS. Thank you, Mr. Chairman.

Mr. HEFLEY. Mr. Evans. Mr. Evans has some questions for the record. We will do that. Do any of—any of the rest of you have any questions for the record as well? We will do that.

Are there any final questions or comments?

If not, the committee stands adjourned.

Thank you, gentlemen, very, very, much.

[Whereupon, at 3:25 p.m., the subcommittee was adjourned.]

A P P E N D I X

APRIL 6, 2005

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

APRIL 6, 2005

Mr. Joel Hefley

Opening Statement

Readiness Subcommittee Hearing

"Military Services' Requirement to Reconstitute Military Equipment Returning from Operation Iraqi Freedom and Operation Enduring Freedom"

April 6, 2005

Mr. Hefley: Good afternoon and welcome to this afternoon's subcommittee hearing on resetting, or reconstitution, of military equipment returning from Operation Iraqi Freedom or Operation Enduring Freedom. This is the subcommittee's second hearing on this topic. The first was held in October 2003. Much of the testimony at that time indicated that there was not enough information

yet to determine the cost of reset. Today, we do know more.

Through emergency supplemental funding the military services have received approximately $9.0 billion for reset costs. The fiscal year 2005 emergency supplemental has a request for approximately $9.8 billion for reset requirements. Although these figures are large, there are more bills to come. We will most likely see those bills in the fiscal year 2006 emergency supplemental.

A structured reset program requires time, facilities, spare parts, trained workers, contractors, forward deployed maintenance workers and full funding that includes both operation & maintenance and procurement dollars. It is not clear to me if the reset programs are fully funded. I have

asked the Director of the Congressional Budget Office to be present today in order to decipher the different methods that can be used to calculate reset costs. Reset is a priority and a must pay bill. Congress must understand how each of the services is determining the size of the bill and managing implementation.

I also intend to explore today to what extent factors other than money limit reset. Do we have the spare parts? Are the adequate facilities both at home and in theatre? And the most challenging factor, time, how much time will it take?

Not surprisingly the Army and Marine Corps have the more significant challenges. The current operational tempo, combined with an aging fleet and significant

combat losses challenge the Army and Marine Corp's ability to sustain operational availability. I expect to learn today what actions the Army and Marine Corps are taking to meet this challenge. I would like to gain a better understanding of the difference between Reset and Recap, two important programs in the Army. I would also like to better understand the Marine's cross-leveling of equipment as a means to make up equipment shortfalls.

I would now like to ask Mr. Ortiz, the ranking member, if he would like to make some opening remarks.

Mr. Ortiz:

Mr. Hefley: Let me introduce the witness and ask if they have an opening statement. Without objection all witnesses written statements will be made part of the record.

First, is Lieutenant General C.V. Christianson, Deputy Chief of Staff, G-4, United States Army.

Second, is Lieutenant General Jan C. Huly, Deputy Commandant Plans, Policies & Operations, United States Marine Corps.

Third, is Lieutenant General Donald J. Wetekam, Deputy Chief of Staff, Installation and Logistics, United States Air Force

Fourth, is Rear Admiral Mark A. Hugel, Deputy Director, Fleet Readiness Division, United States Navy

Finally, is Mr. Douglas Holtz-Eakin, Director, Congressional Budget Office

HONORABLE SOLOMON ORTIZ

FISCAL YEAR 2006 NATIONAL DEFENSE AUTHORIZATION BUDGET REQUEST FOR MILITARY CONSTRUCTION, FAMILY HOUSING, BASE CLOSURES, AND FACILITIES OPERATIONS AND MAINTENANCE.

April 6th, 2005

Thank you, Mr. Chairman.

I join you in welcoming our distinguished witnesses, and I look forward to hearing their testimony on this important readiness issue.

Before I begin, I would like to first express my thanks and appreciation to our military personnel for all the sacrifices they make in providing for our defense.

I would also like to recognize the support of the many dedicated government service civilians and private individuals who work hard to help maintain the readiness of our Armed Forces.

We can not fight and win without them and I thank them for their dedicated service to our national defense.

Mr. Chairman, our Armed Forces have been engaged in combat operations for over three years now and the stress of this continuous combat is clearly evident on our military's equipment.

Increased usage rates, environmental conditions, and heavier armor are wearing out our ground and air equipment as much as five times faster than peacetime.

This mounting maintenance problem is only made more difficult by the Department of Defense's requirement to reconfigure unit equipment to meet its goals for transformation.

While I am pleased to see the effort that the services have put into meeting these challenges, I am very concerned by the growing backlog of maintenance expenses that have not been requested by the Department in the FY06 budget or the supplemental budget requests.

By Congressional Budget office estimates, this growing mountain of worn out equipment could cost as much as $18 billion dollars to repair or replace.

This is an enormous shortfall and surely it will have an effect on our ability to future respond to contingencies.

I hope the officers on our panel today, who have the very difficult job of managing this emerging problem, will be able to explain to use how they plan to overcome this funding shortfall.

One final point I would like to make before I close is about our defense industrial base.

The depots that repair all of this damaged and worn out equipment are carrying a tremendous load.

At this point, I see little surge capacity remaining in the depots to meet emerging requirements.

The current conflicts have demonstrated that we must have the ability to surge our industrial base and sustain that rate over the long term.

I hope our witnesses will take an opportunity to comment on the defense industrial base and how they plan to ensure our depots are strong and fully equipped to meet the needs of our troops in the field.

Thank you for coming to speak to us today. I look forward to hearing your testimony on how can best support the readiness of our Armed forces.

Thank you, Mr. Chairman.

RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL C. V. CHRISTIANSON
DEPUTY CHIEF OF STAFF, G-4
UNITED STATES ARMY

BEFORE THE

COMMITTEE ON ARMED SERVICES
SUBCOMMITTEE ON READINESS
UNITED STATES HOUSE OF REPRESENTATIVES

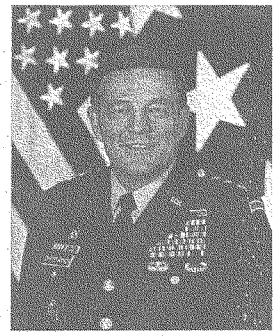
FIRST SESSION, 109TH CONGRESS

ON THE ARMY'S REQUIREMENTS TO RECONSTITUTE MILITARY EQUIPMENT RETURNING FROM OPERATION IRAQI FREEDOM AND OPERATION ENDURING FREEDOM

APRIL 6, 2005

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

Lieutenant General C.V. (Chris) Christianson
Deputy Chief of Staff, G-4
Headquarters, Department of the Army



Lieutenant General Claude V. (Chris) Christianson assumed his duties as the Deputy Chief of Staff, G4, Department of the Army, on October 2nd, 2003. Lieutenant General Christianson, a Distinguished Military Graduate of the Army ROTC program at North Dakota State University was commissioned as an Ordnance Officer in 1971.

From 1971-1974, General Christianson was assigned to the 1st Infantry Division, Fort Riley, Kansas; first as Weapons Platoon Leader, then Executive Officer in the 1st Battalion, 18th Infantry, and later as a Shop Officer and the S2/3 (Operations Officer) in the 701st Maintenance Battalion. He was assigned to Thailand in 1974 for two years, where he served as the Chief of Shop Operations with the United States Army Support Group in Samae San, and later as a Customs Officer with the JUSMAG-THAI in Bangkok. From 1977 to 1979, he was assigned to the 9th Infantry Division, Fort Lewis, Washington, as the Commander of a Forward Support Maintenance Company in the 709th Maintenance Battalion, and later as the operations Officer in the Division Support Command. From 1979 to 1982, General Christianson was an Assistant Professor of Military Science at Colorado State University, Fort Collins, Colorado. From 1983 to 1986, he served as the Army Guard Maintenance Programs and Policy Officer with the National Guard Bureau, Washington, DC. In 1986, he was assigned to the Southern European Task Force in Vicenza, Italy, where he served as the Director of Logistics for the 22nd Area Support Group, for three years. From 1989 to 1991, General Christianson commanded the 725th Main Support Battalion, 25th Infantry Division (Light), Schofield Barracks, Hawaii. In 1992, after completion of the Army War College, he returned to Hawaii as the Assistant Chief of Staff G4, 25th Infantry Division (Light). In 1993, General Christianson was assigned as the Chief of the Office of Defense Cooperation (ODC) at the American Embassy, Rome, Italy, where he served for nearly two years. From 1995 to 1997, General Christianson commanded the 3rd, and later, the 1st Infantry Division Support Commands in Kitzingen, Germany. After command, he was assigned as the G4 for the U.S. V Corps in Heidelberg, Germany. After his selection to Brigadier General, General Christianson was assigned as the Deputy Commanding General for the 21st Theater Support Command in Kaiserslautern, Germany, where he served from 1998 to 2000. From 2000 to 2002, General Christianson served as the Assistant Chief of Staff, C4/J4/G4 United Nations Command/Combined Forces Command/United States Forces Korea/Deputy Commanding General (Support), Eight United States Army, Republic of Korea. From August 2002 to July 2003 he assumed the duties as Assistant Deputy Chief of Staff, G-4, Headquarters Department of the Army with duty as Chief, Logistics, Coalition Forces Land Component Command, Camp Arifjan, Kuwait in support of Operation Iraqi Freedom.

General Christianson has a Bachelor's Degree in Industrial Engineering from North Dakota State University. His military education includes the Infantry Officer's Basic Course, Ordnance Officer's Advanced Course, the Armed Forces Staff College and the Army War College. His awards and decorations include the Defense Superior Service Medal, Legion of Merit, Bronze Star Medal, Meritorious Service Medal, Armed Forces Expeditionary Medal, Global War on Terrorism Expeditionary Medal, Global War on Terrorism Service Medal, Korea Defense Service Medal, Armed Forces Service Medal and the NATO Medal, Expert Infantryman's, Parachutist, Air Assault and Army General Staff Identification Badge plus the Ranger Tab.

STATEMENT BY
LIEUTENANT GENERAL C.V. CHRISTIANSON
DEPUTY CHIEF OF STAFF, G-4, ARMY

Chairman Hefley, Ranking Member Ortiz, distinguished members of the Committee, thank you for the opportunity to appear before you to talk about the work being done to reconstitute our Army equipment in preparation for the next mission. All of the services face a similar challenge: that is, to maintain the operational readiness necessary to win the Global War on Terrorism (GWOT) while transforming capabilities to defeat any future threat to our nation. Nothing we do is more urgent or pressing than to ensure that our Soldiers, Sailors, Airmen and Marines have the equipment they need to meet tomorrow's missions.

Our task would be impossible without the tremendous support we receive from you, the Committee Members, and your staffs. On behalf of our Soldiers, civilian employees, and family members, I would like to thank you for that support. Over the past year, your support has helped us make tremendous strides forward in transforming the Army and enhancing the capabilities of our Soldiers, their units and their equipment. Your support is helping the Army achieve its most profound transformation of the last half century. This transformation will enable us to defeat today's dangerous, adaptive enemy even as we prepare to meet an uncertain future. Fundamental to the Army's ability to meet future threats is the absolute requirement that we rapidly return our operational units to an effective level of readiness upon their return from operational employment.

Over the past three years (2003-2005), the Army has deployed over 40% of its equipment to Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF). Currently, the Army has approximately 15% of its equipment deployed. That percentage includes 16% of our Apaches, 20% of our Blackhawks, 14% of our Abrams tanks, 15% of our Bradley Fighting Vehicles, and 15% of our Heavy Expanded Mobility Tactical Trucks (HEMTT). In addition, over 10% of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) fleet and over 30% of the Stryker fleet is currently deployed in OIF.

The operational tempo (OPTEMPO) and consequent wear on the Army's deployed equipment greatly exceeds that experienced during our peacetime training environment. According to the Army's recent stress studies and the Congressional Budget Office, Army helicopters are experiencing usage rates roughly twice peacetime rates; tanks and other tracked vehicles are being used at roughly five times peacetime rates; and our truck fleet is operating at three to five times peacetime rates. The Army truck fleet, in particular, is experiencing some of the more pronounced problems of excessive wear because of the high OPTEMPO, the harsh desert environment and the addition of heavy armor. These operational conditions shorten the military useful life of our equipment and demand a larger investment in depot maintenance at a much earlier stage than expected or programmed. (Military useful life includes readiness, reliability, enhanced capabilities, and economic considerations)

The increased OPTEMPO, combined with an already-aging fleet and the significant combat losses, challenges the Army's ability to sustain operational availability. Additionally, the demand to be ready to respond

to the next contingency and the compelling need to transform the Army create a significant readiness challenge for our Army. This challenge can only be met with a structured, formal, fully-funded program to RESET the Army's equipment when it returns from the operational area complemented by a long-term Recapitalization (RECAP) program to ensure we can sustain the readiness of our systems over their life span.

RESET

The term RESET is used to define a series of actions taken to restore unit equipment to a desired level of combat capability after returning from contingency operations. RESET is required to address the readiness challenges resulting from increased usage and stress. The sole purpose of RESET is to bring unit equipment to combat-ready condition either for its next rotation in support of current operations or for other, unknown future contingencies. RESET actions include the repair of existing equipment, the replacement of equipment lost during operations and the RECAP of equipment that needs extensive refurbishment. RESET repairs are conducted in accordance with applicable Army maintenance standards (Technical Manual 10/20 for ground platforms and Special Technical Inspection and Repair Standards for aviation) and address damages incurred due to harsh environmental conditions.

The costs to RESET the Army have not been programmed since they are incremental costs over and above what we normally need to sustain the Army. In accordance with DoD policy and intent, we rely on supplemental funds to pay for our RESET program. In fiscal year 2003, the Army received $1.2 billion to execute RESET, and in fiscal year 2004,

we received $3.7 billion. In this year's supplemental, we requested $6.5 billion to support our projected RESET requirements. At the time we built the fiscal year 2005 supplemental we estimated everything the Army could execute during the year.

While we know the number of brigades expected to return from the next rotation, we cannot be certain of the total fiscal year 2006 RESET requirements until the combatant commander identifies his total force requirements. If the operational theater stabilizes or becomes more secure in fiscal year 2006, it is possible that the combatant commander may reduce the forces required in theater. If that were to happen, the amount of equipment returning to home station, and the resulting RESET requirements, would increase.

As we developed our RESET program, we wanted to categorize our equipment in order to put some discipline into the requirements process. There are four categories of equipment being used in current operations -- each drives the type and the timing of RESET actions. The categories are: Deployed Equipment, Stay-Behind Equipment (SBE), Army Pre-positioned Stocks (APS), and Battle Losses.

Deployed Equipment

Deployed equipment is that group of equipment that deploys with a unit and returns back to home station with the same unit. Rapid RESET of this category of equipment is crucial and is tied directly to unit mission requirements. It is imperative that this equipment be brought back to

combat capability quickly so the unit is prepared to respond to the next contingency requirement, which in many cases is a return to the OIF/OEF operational area.

The OIF1 workload consists of approximately 1,000 aviation systems, 124,400 communications and electronics systems, 5,700 combat/tracked vehicles, 45,700 wheeled vehicles, 1,400 missile systems, 9 Patriot battalions, and about 232,200 various other systems. The Army has nearly completed RESET of the equipment that was redeployed as part of OIF1. The 3rd Armored Cavalry Regiment, the 3rd Infantry Division, and the 3rd Brigade, 1st Armored Division have completed RESET. Other major units, such as the 4th Infantry Division and 101st Airborne Division, are nearing completion.

While the RESET of OIF1 units continues, the Army is receiving equipment from 17 Brigade Combat Teams (BCT) redeploying from OIF/OEF 04-06 (the second OIF rotation) now. Over the course of fiscal year 2005, we expect to RESET over 35,000 wheeled vehicles, 5,000 tracked vehicles, and over 500 aircraft. Of that number, more than 10,000 of these major platforms will be going into our depots for RESET.

In fiscal year 2006, 19 BCTs will return to home station from combat operations in OIF/OEF. In summary, the Army has nearly completed the RESET of OIF1 equipment; OIF/OEF 04-06 equipment is arriving now; and OIF/OEF 05-07 equipment is coming next year.

Stay Behind Equipment

The second category of equipment is identified as stay behind equipment (SBE). It deploys with a unit and is left behind in the operational area to be used by follow-on units. SBE offers two major benefits to the Army. First, leaving critical equipment in the operational area provides Soldiers with enhanced capability. For example, all up-armored vehicles have been designated as SBE to ensure we maximize force protection capabilities where they are needed most. Second, keeping major systems in the operational area significantly reduces the strategic transportation requirements and costs and enables us to conduct transition operations more quickly. In addition to the armored vehicles, examples of SBE include critical communications infrastructure, equipment procured to provide new technology needed by our Soldiers, explosive detection capabilities, and unmanned aerial vehicles (UAV).

Everyday, SBE is maintained by our logisticians forward. Because we do not know when SBE will come out of theater, it is not yet programmed for RESET. To illustrate this point, we project SBE RESET requirements will include 10,000 Up Armored HMMWVs and 26,500 Add-on-Armored vehicles. As the operating environment allows us the opportunity to draw down the SBE pool, we will request funding to begin RESET of that equipment.

Army Pre-positioned Stocks

Army Pre-positioned Stocks (APS) includes equipment that the Army has maintained for the sole purpose of rapidly responding to

contingency operations around the world. We used our APS to support OIF/OEF. Today, there are 14,000 items of APS, ranging from night vision goggles to tanks, in use in the operational area. Of the 14,000 items, approximately 350 are tracked vehicles and approximately 3,500 are wheeled vehicles. Much like SBE, this equipment is being maintained everyday by our logisticians forward, and like SBE, we have a bow wave of work to do when we are able to draw down the APS stocks. This cost assumes depot RESET of tracked and wheeled vehicles and returning war reserve stocks to mission-ready levels.

Like SBE, the Army can begin to repair and replace this equipment only upon reduction and/or cessation of hostilities, and we believe that APS will be the last category of equipment that we redeploy from the operational area. Based on that assumption, we estimate that it will take at least two years after the end of the conflict to fully repair and to replace Army pre-positioned equipment used in this operation.

Battle Losses

The last category of equipment includes equipment that has been lost to the Army inventory and must be replaced. The Army's inventory losses can be broken down into two categories - battle losses as a result of combat action and equipment that is lost because it cannot be repaired. The latter is referred to as "washed out" equipment. There is an important distinction between battle losses to a tactical commander and battle losses to the Army. A battle loss to a commander is any equipment that is damaged or destroyed and must be evacuated out of the

commander's area for repair. The Army replaces those commander's losses with other assets. However, a battle loss to the Army is a piece of equipment that cannot or should not be repaired at any level; it is dropped from the Army inventory.

Battle losses to the Army inventory since the beginning of OIF/OEF include 51 helicopters, 97 combat vehicles, 76 heavy wheeled vehicles, 217 light wheeled vehicles, and 62 medium wheeled vehicles. These quantities are as of the second quarter of fiscal year 2005.

The estimate of equipment determined to be "washed out" is based on what we saw from equipment used during OIF1. We estimate that losses will be: 3% for aviation, 2% for tracked vehicles, 2% for missile systems, and 12% for wheeled vehicles. This "washout rate" is directly related to up-armoring our wheeled vehicles and the hard driving and heavy usage required in combat operations.

In the fiscal year 2005 emergency supplemental submitted to Congress, the Army requested $552.95 million for the replacement of over 800 major pieces of equipment, to include 18 helicopters, 350 wheeled vehicles, and 50 tracked vehicles. Of the 51 aircraft lost in theater, we have requested funding to replace 18 (13 Apache and 5 Blackhawks) this year; we replaced 15 using previous supplementals and congressional additions. The replacement of 18 Kiowa (OH-58) helicopters has been deferred to await the fielding of the new Armed Reconnaissance Helicopters (ARH).

Recapitalization (RECAP)

The Army's RESET program is complemented by the Army's Recapitalization or RECAP program. RECAP is the Army's long-term investment strategy to sustain the readiness of the Army. RECAP is a depot-level maintenance activity that completely rebuilds a system and returns it to a like-new, zero-miles or zero-hours standard and is used to introduce, or spiral in, selected upgrades to the current fleet. Our fiscal year 2005 supplemental request includes $2 billion to support the RECAP of several critical systems as they return from operational deployment. The M1 Abrams tank and the M2 Bradley Fighting Vehicle are examples of systems in which RECAP is used to produce like-new systems at less cost than new procurement. The objectives of the RECAP process include: extending service life, reducing operating and support costs, enhancing capability, and improving system reliability, maintainability, safety and efficiency.

The actions described in this statement describe a comprehensive approach to providing our forces with ready and capable equipment, even in the midst of conflict. The RESET program outlined here will: (1) ensure that the forward commanders have the combat power they need while minimizing the load on the strategic transportation system; (2) ensure that returning units will be rapidly returned to an operationally-ready condition – prepared for whatever mission comes their way; (3) ensure that, as we are able to draw down our forward forces, we can RESET the equipment that we have kept in the operational area; (4) ensure that APS equipment is brought back to readiness condition for its mission; and (5) ensure that we have in place a long-term program to sustain the operational readiness

of all of our critical systems over their life-spans. RESET and RECAP are essential to the Army's ability to meet readiness requirements. It is absolutely critical that we get the necessary funding to support them.

Mr. Chairman, on behalf of our Soldiers, their families and our professional civilians, we greatly appreciate the support of the Congress, and especially this Committee in addressing our needs. Your support for the President's Budget and the emergency supplemental appropriations has given us a solid foundation upon which we are building a stronger, more relevant and ready Army. We are your Army at war. We see ourselves as a full member of the joint and interagency team, and we stand prepared to respond. Thank you for the opportunity to appear before you today. I look forward to answering your questions.

STATEMENT OF
REAR ADMIRAL MARK A. HUGEL, U.S. NAVY
DEPUTY DIRECTOR, FLEET READINESS DIVISION

BEFORE THE

SUBCOMMITTEE ON MILITARY READINESS
OF THE
HOUSE ARMED SERVICES COMMITTEE

APRIL 6, 2005

Chairman Hefley, Congressman Ortiz, and distinguished members of this subcommittee, I am extremely pleased to have the opportunity to testify before you, along with my esteemed Service counterparts, on the Navy's requirements to reconstitute its equipment used in direct support of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). Through your generous support, the Navy enjoys a high level of sustained readiness and continues to project credible combat power throughout the world in support of the Global War on Terrorism.

The Navy has been involved in direct support of combat operations in Southwest Asia for several years. During the build up and subsequent execution of the first phase of OIF, the Navy provided a magnificent show of force which consisted of six Carrier Strike Groups and their associated Air wings, four Expeditionary Strike Groups, two Amphibious Task Forces as well as a wide variety of Naval forces ashore. This was the largest expeditionary force since the Korean War. This force level remained in place until May 2003 at which time various components of the force began to return to homeport for reconstitution efforts. The amphibious assets and ashore Combat Support/Combat Service Support assets remained in theater for a longer duration than the carrier forces in order to provide uninterrupted support to our ground combat elements, namely the United States Marine Corps. Since the declared end of hostilities, the Navy has been able to maintain a notional presence level of one Carrier Strike Group and one Expeditionary Strike Group in the CENTCOM theater. It has also maintained extensive support to the Marine Corps in the form of medical, explosive ordnance disposal and Naval construction units. The Navy has been able to execute all mission requirements

with this notional force level and has the ability to surge assets to meet increased operation tasking as part of the Fleet Response Plan (FRP). As you may recall, the FRP is designed to consistently deliver six forward-deployed Carrier Strike Groups within 30 days plus an additional two in 90 days or less, in what you have heard referred to as "6+2". I will first discuss ship and submarine readiness and then follow with discussions on aviation readiness and Naval Construction Force (Seabee) readiness.

As I previously stated, the Navy employed a sizable force during OIF. The work packages for those ships returning from combat operations were larger than normal due to extended deployment length (USS ABRAHAM LINCOLN CSG was deployed for 10 months) and the higher wartime operational tempo. Our four public shipyards (located in Kittery, Maine; Portsmouth, Virginia; Bremerton, Washington and Pearl Harbor, Hawaii) and the private shipyards responded superbly to the challenge of reconstituting the force and ensuring it was ready to re-deploy in top material condition to meet other real world contingencies. In fiscal year 2003, changes in ship deployment and return schedules caused several maintenance period start dates to shift within the fiscal year. Also, three maintenance availabilities scheduled for fiscal year 2003 shifted into fiscal year 2004. The success enjoyed by the public and private sector in tackling the surface and submarine maintenance requirements further demonstrates the enhanced partnership of the Nation's ship repair base.

During fiscal year 2003, the Navy executed $3.9B on ship maintenance, which included 95 ship and submarine maintenance periods. Due to the surge maintenance requirement associated with the successful execution of OIF and other strategic objectives of the Global War on Terrorism, the Navy requested and received $1.4B in

supplemental operations and maintenance funding. This significant and much appreciated funding was applied to increased depot and intermediate maintenance requirements of 62 ships and submarines.

During fiscal year 2004, $3.5B of planned ship maintenance, which included 73 maintenance availabilities, was funded. However, the requirement for our ships and submarines to remain engaged in the Global War on Terrorism remained. Through the continued support of the Congress, $600M of Supplemental Operation and Maintenance funds were appropriated and provided to the Navy for ship depot maintenance. This critical funding was applied to depot and intermediate maintenance on 42 ships and submarines that were directly involved in supporting the Global War on Terrorism.

The ship and submarine maintenance program for fiscal year 2005 is $3.9B, which will fund 85 ship and submarine maintenance availabilities. Currently, 43 availabilities have commenced and the remaining 42 availabilities are projected to start on time. We project that at this funding level, $150M of non-war related maintenance will be deferred from fiscal year 2005. Additionally, the Ronald W. Reagan National Defense Authorization Act provided $76M of supplemental funding to ship maintenance. This timely funding was applied to the USS GEORGE WASHINGTON (CVN 73) and USS JOHN C STENNIS (CVN 74) dry-docking availabilities. An additional $211M has been requested and is part of the President's recently submitted fiscal year 2005 supplemental budget request. This funding will be applied to address the maintenance resulting from a higher operational tempo for those ships and submarines in the Southwest Asia Theater of operations. The additional funding requested will sufficiently address all increased maintenance requirements as a result of wartime operations and will

not create any bow waves in the maintenance program or increase the peacetime deferred maintenance.

The fiscal year 2006 requirement for ship and submarine maintenance is nearly $4.0B, which will fund 76 maintenance availabilities. This requirement supports the correct FRP readiness posture to support the Nation's maritime war fighting needs. The Navy's ship repair base (both public and private shipyards) has the capacity and capability to execute the currently scheduled maintenance requirements. The fiscal year 2006 peacetime annual deferred maintenance costs are projected to be $123M. We have remained in compliance with United States Code, Title 10, Section 2466 (50/50 Law) and anticipate we will continue to remain in compliance while addressing the Fleet's maintenance needs.

The ship maintenance process is a key component of the dynamic Fleet Response Plan, which, as you are aware, maximizes Carrier Strike Groups availability through a corporate enterprise approach. This effective and efficient approach revolves around several key initiatives, which include SHIPMAIN, the Shipyard Transformation Plan, Regional Waterfront Maintenance Integration, and the use of Multi-Ship/Multi-Option contracts.

As part of SHIPMAIN, we are focusing on "best business" practices that are changing the culture of getting ship repair work completed using a standard process nationwide. Through new procedures, SHIPMAIN implements a refined process that reduces cycle time, prioritizes shipboard work items, and most importantly, empowers Sailors in the maintenance decisions of their ship.

The Shipyard Transformation Plan best utilizes the Nation's public and private nuclear shipyards and contractor support. It capitalizes on the ability to mobilize Fleet support infrastructure across the board and to rise to meet increased Fleet demands in a time of war. This initiative is significantly improving the efficiency of our nuclear capable shipyards.

The Regional Waterfront Maintenance Integration initiative has resulted in consolidations of depot and intermediate maintenance facilities into Region Maintenance Centers (RMC's). Consolidating waterfront infrastructure eliminates redundancy in mission and administration functions while establishing a single pier-side maintenance activity to support Sailors and streamline maintenance actions.

The Multi-Ship/Multi-Option Contract initiative allows for the executing agency to better plan work and takes advantage of the best repair capabilities. These contracts will provide long-term vendor relationships throughout the various ships' cycles in order to reduce costs through the benefits of advance planning. The above initiatives are in place and functioning throughout the ship maintenance community.

The Navy does not expect to replace any ships or submarines due to combat losses suffered from the Southwest Asia Theater of operations. Although we are seeing a higher operational tempo for those ships and submarines in theater, all the required maintenance for those assets is being performed within the prescribed periodicity. Our procurement profile for ships and submarines is reflective of the Navy's commitment towards sustained future readiness. The procurement profile has been previously briefed to this sub-committee by Admiral John Nathman on March 3, 2005.

The Navy and Marine Corps Aviation depots have been heavily involved in the sustainment and support of operations associated with the Global War on Terrorism. The Navy and Marine Corps aviation team does very detailed planning down to the specific bureau number of each aircraft and the availability of engines and components are closely monitored. Although the Navy's aviation depots are performing magnificently, the level of their current operations has been challenging. For instance, there has been an increase in aircraft, engine, and aviation support equipment depot level workload attributed to higher 'wear and tear' plus increased usage rates for aircraft engaged in support of Afghanistan and Iraq.

The three Navy and Marine Corps Aviation Depots at Cherry Point, NC; North Island, CA; and Jacksonville, FL have sufficient capacity to execute the remaining fiscal year 2005 and planned fiscal year 2006 workload. The Navy will not require any change in the division of work between organic and contractor facilities to execute the planned aviation workload. The condition of some assets upon their return from OIF may require an increase of contractor touch labor at Navy / Marine Corp Depots. This touch labor will assist our aviation depots, in conjunction with a judicious combination of overtime, augmenting the Navy's Service Work force at the aviation depots. The Navy is confident that it can handle any surge without having to significantly change the balance of the aviation workload between public and private sector entities.

The three aviation Navy / Marine Corps depots have the required personnel to support current operations for returning aircraft and associated engine and component workloads and also support our ongoing overseas operations. The workforce consists of approximately 10,800 Civil Service employees and is regularly augmented by contractor

employees as required. The number of contractor personnel performing touch labor is increased or decreased to efficiently accommodate fluctuations in workload.

In addition, qualified personnel are performing more preventive maintenance in the field thus precluding unacceptable material condition degradation to the maximum extent practical. The Navy will continue to cycle aircraft back to the depots from Iraq and Afghanistan at programmed intervals to the maximum extent possible. This will ensure adequate numbers of aircraft remain available to operating forces. Engine production is keeping pace with demand and surge will not exceed depot engine production capacity as a result of ongoing operations.

During fiscal year 2003, the Navy programmed $734M of operation and maintenance funds to address the maintenance requirements for 702 aircraft and 1139 engines. Due to the surge maintenance requirement associated with the successful execution of OIF and other strategic objectives of the Global War on Terrorism, the Navy requested and received $330M in supplemental funding. This generous and much appreciated funding was applied to address the increased depot maintenance requirements of 101 aircraft and 503 engines. This critical supplemental funding was essential for significantly reducing the maintenance bow wave associated with the return of our aircraft from OIF.

During fiscal year 2004, the Navy programmed $849M of operation and maintenance funds for 757 aircraft and 1417 engines, however, the requirement for our aircraft and engines to remain engaged in the Global War on Terrorism remained. Through the continued support of the Congress, $106M of Operation and Maintenance supplemental funds was appropriated and provided to the Navy. This critical funding

was applied to aircraft and engines that were directly involved in supporting the Global War on Terrorism.

The aircraft and engine requirement for fiscal year 2005 is $1.04B, which will fund 818 aircraft and 1,482 engine maintenance activities. Currently, 401 aircraft and 740 engines have been inducted in the Depots and the remaining aircraft and engine work is projected to commence on time. An additional $127M has been requested and is part of the President's recently submitted fiscal year 2005 supplemental budget request. If approved, this funding will be applied to address the maintenance requirements due to a higher operational tempo for those aircraft in the Southwest Asia Theater of operations. The additional funding will sufficiently address all maintenance requirements as a result of wartime operations and will not create any bow waves in the maintenance infrastructure.

The fiscal year 2006 requirement for aircraft and engine maintenance is $877M, which will fund the maintenance of 834 aircraft and 1799 engines. This requirement represents the correct readiness posture to support the Nation's naval aviation war fighting needs. The Navy's aviation repair base (both public and private) has the capacity and capability to execute the currently scheduled maintenance requirements.

The aviation maintenance community is heavily engaged with initiatives that will increase the effectiveness and readiness of the aviation community. The Naval Aviation Enterprise (NAE) is a warfighting partnership that brings all aviation stakeholder commands together in a common forum, so that interdependent issues can be resolved on an Enterprise-wide basis. The NAE enables communication across all elements of the Enterprise, fosters organizational alignment, encourages inter-agency and inter-service

integration, stimulates a culture of productivity and facilitates continuous improvement. Working together optimizes the use of existing resources, manages the costs associated with generating readiness and harnesses change as a positive force within our Navy and Marine Corps. Besides working very hard to shoulder the increased workloads being experienced by the Global War on Terrorism, the aviation depots are aggressively working to achieve the "Cost-Wise Readiness" goal established by our Naval Aviation leadership. They are transforming the way they do maintenance by implementing the "Depot AirSpeed" initiative, an effort that takes advantage of proven industry business best practices such as theory of constraints, six sigma, lean manufacturing, and others. This effort is being synched up with the Fleet's intermediate level maintenance capability, which is driving repair cycle-time reductions and will make possible future inventory reductions and process changes to become more effective and also efficient. To date, the "Depot AirSpeed" initiative has resulted in: an improvement in turn around time for the CH-46 aircraft at the Cherry Point Depot from 215 to 170 days and work in process dropped from 28 aircraft to 18, using the same staffing level; a drop in the turnaround time for EA-6B Re-wing at the Jacksonville Depot from 594 days to 450 and work in process dropped from 16 aircraft to 9, with 5 of the last 7 delivered ahead of schedule; and at the North Island Depot, we've seen a reduced turnaround time on the F/A-18 aircraft from 192 to 132 days and work in process dropped from 31 aircraft to 16. Additionally, the implementation of "Enterprise AirSpeed" aligns Organizational, Intermediate and Depot-level supply replenishment and repair processes to the demands of the Fleet operator, enabling the effective and efficient preparation of the right number of cost-wise, Ready-for-Tasking aircraft required to perform the mission.

The Seabees are providing extensive support to the Marine Corps during OIF, continue to support both USMC and Army ground forces in the CENTCOM theater today and are expected to maintain or increase their level of deliberate construction support during Stability Operations in the future. During initial combat operations, over 3000 Seabees with their associated heavy construction equipment provided support to maneuver elements through road and bridge construction, establishment of forward operating bases, expansion and repair of airfields and construction of prisoner holding areas. This support was in the form of an Engineer Group and two Naval Construction Regiments to provide command and control, four Naval Mobile Construction Battalions (NMCBs) doing the bulk of the deliberate construction missions, four additional NMCB Air Detachments to reinforce the NMCBs, two Underwater Construction Teams, one Naval Construction Force Support Unit providing additional heavy equipment and one Construction Battalion Maintenance Unit. Even before the end of combat operations, Seabees began rebuilding Iraqi infrastructure in order to jump-start the reestablishment of normal life in southern Iraq. Their efforts continue today through infrastructure construction, renovation of schools, clinics, police stations and other public buildings, force protection construction for coalition and Iraqi troops, maintenance of main supply routes and other deliberate construction in both permissive and non-permissive environments.

Reconstitution of equipment utilized in OIF began during the summer of 2003, and was essentially complete by October 2004. With few pieces of equipment sustaining enough damage to require replacement, receipt of $130M in supplemental maintenance funding was sufficient to reset the force. Reconstitution was accomplished by a

combination of efforts by existing maintenance facilities at two Seabee bases as well as contracted repairs by private sector repair facilities.

Subsequent redeployment of approximately 1000 Seabees and their equipment for OIF-2 and follow-on operations has resulted in a continued need for approximately $50M/year in supplemental operational funding, which was received in the fiscal year 04 Supplemental and was requested for fiscal year 05. These sustained operations have proven to be extremely demanding on construction support equipment such as cargo trucks and HMMWVs, which has also generated a requirement for approximately $20M/year in procurement funding to replace these assets at an accelerated rate.

Maintenance and procurement budget requests for fiscal year 06 reflect a peacetime baseline for the Naval Construction Force, with a continued reliance on supplemental budget submissions to reimburse funding of Cost of War expenditures. Programmed plus supplemental maintenance funding will continue to allow Naval Construction to sustain their current ability to consistently attain a 95% availability of equipment in theater through an aggressive field maintenance program and effective in-theater parts support with reach-back capability to maintenance facilities in the U.S.

Mr. Chairman, on behalf of the United States Navy, I want to thank you for the Committee's continued support of the Armed Forces as we continue to successfully execute the Global War on Terrorism. I would again like to express my deep appreciation to the members of this committee for your lasting support in sustaining our efforts in putting to sea the most capable Navy the world has seen and to thank you for this opportunity to appear before you today. I stand ready to answer any questions you may have.

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE SUBCOMMITTEE ON READINESS

COMMITTEE ON ARMED SERVICES

UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: RECONSTITUTION OF EQUIPMENT

STATEMENT OF: LIEUTENANT GENERAL DONALD J. WETEKAM
DEPUTY CHIEF OF STAFF, INSTALLATIONS AND LOGISTICS
UNITED STATES AIR FORCE

APRIL 6, 2005

BIOGRAPHY

UNITED STATES AIR FORCE

LIEUTENANT GENERAL DONALD J. WETEKAM

Lt. Gen. Donald J. Wetekam is Deputy Chief of Staff for Installations and Logistics, Headquarters U.S. Air Force, Washington, D.C. General Wetekam is responsible to the Chief of Staff for leadership, management and integration of Air Force civil engineering, services, communication operations, logistics readiness, supply, transportation, and aircraft and missile maintenance, as well as setting policy and preparing budget estimates that reflect enhancements to productivity, combat readiness and quality of life for Air Force people.

General Wetekam entered the Air Force in June 1973 after graduating from the U.S. Air Force Academy. A career logistics officer, the general has commanded three maintenance squadrons, a logistics group and a logistics center. He has served staff tours at both major command and Air Staff levels.

EDUCATION

1973 Bachelor of science degree in history, U.S. Air Force Academy, Colorado Springs, Colo.
1978 Master of engineering administration degree, University of Utah
1994 Distinguished graduate, Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, D.C.

ASSIGNMENTS

1. June 1973 - January 1974, student, munitions officer training, Lowry Air Force Base, Colo.
2. January 1974 - July 1974, student, explosive ordnance disposal training, Indian Head Naval Ordnance Station, Md.
3. July 1974 - July 1975, officer in charge of weapons loading and explosive ordnance disposal, 4th Munitions Maintenance Squadron, Seymour Johnson AFB, N.C.
4. July 1975 - May 1976, officer in charge of explosive ordnance disposal, later, supervisor, 635th Munitions Maintenance Squadron, U-Tapao Royal Thai Naval Airfield, Thailand
5. May 1976 - July 1979, munitions services officer, later, officer in charge, 421st and 16th

aircraft maintenance units, 388th Tactical Fighter Wing, Hill AFB, Utah
6. July 1979 - March 1981, officer in charge, 61st Aircraft Maintenance Unit, 56th Tactical Fighter Wing, MacDill AFB, Fla.
7. March 1981 - April 1984, officer in charge, 313th Aircraft Maintenance Unit, later, job control officer, 50th Tactical Fighter Wing, Hahn Air Base, West Germany
8. April 1984 - June 1986, maintenance staff officer, later, member, Commander's Action Group, Headquarters Tactical Air Command, Langley AFB, Va.
9. June 1986 - July 1989, Commander, 56th Equipment Maintenance Squadron, and 4456th and 56th aircraft generation squadrons, MacDill AFB, Fla.
10. July 1989 - July 1993, F-15 and standard avionics logistics program manager, later, Deputy Director, Chief of Staff Operations Group, Headquarters U.S. Air Force, Washington, D.C.
11. July 1993 - June 1994, student, Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington D.C.
12. September 1994 - November 1995, Commander, 49th Logistics Group, Holloman AFB, N.M.
13. November 1995 - November 1997, Director, Aircraft Management Directorate, Oklahoma City Air Logistics Center, Tinker AFB, Okla.
14. November 1997 - June 1998, Vice Commander, Oklahoma City Air Logistics Center, Tinker AFB, Okla.
15. June 1998 - February 2000, Director of Logistics, Headquarters Pacific Air Forces, Hickam AFB, Hawaii
16. February 2000 - May 2000, Deputy Director of Combat Weapon Systems, Headquarters Air Combat Command, Langley AFB, Va.
17. May 2000 - February 2002, Director of Maintenance and Logistics, Headquarters Air Combat Command, Langley AFB, Va.
18. February 2002 - February 2004, Commander, Warner Robins Air Logistics Center, Robins AFB, Ga.
19. February 2004 - present, Deputy Chief of Staff for Installations and Logistics, Headquarters U.S. Air Force, Washington, D.C.

MAJOR AWARDS AND DECORATIONS
Distinguished Service Medal
Legion of Merit with oak leaf cluster
Meritorious Service Medal with four oak leaf clusters
Air Force Commendation Medal with oak leaf cluster

OTHER ACHIEVEMENTS
1990 - 1992 President, Maintenance Officers Association
1994 Association of the U.S. Army Award for Research Excellence, Industrial College of the Armed Forces
2001 Eugene M. Zuckert Management Award, Secretary of the Air Force

EFFECTIVE DATES OF PROMOTION
Second Lieutenant June 6, 1973
First Lieutenant June 6, 1975
Captain June 6, 1977
Major Nov. 1,1984
Lieutenant Colonel Sept. 1, 1989
Colonel Feb. 1, 1994
Brigadier General July 1, 1999
Major General April 1, 2002
Lieutenant General Feb. 23, 2004

(Current as of April 2004)

Introduction

Chairman Hefley, Congressman Ortiz, and distinguished members of the committee, thank you for the opportunity to appear before you to present the status of the Air Force requirements to reconstitute equipment returning from Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF). As the Air Force Deputy Chief of Staff for Installations and Logistics, it is my privilege to report on our reconstitution efforts, our successes and our challenges for the future. On behalf of Acting Secretary Dominguez and General Jumper, thank you for your continued, strong support of the Air Force.

Air and Space Expeditionary Force

The Air Force organizes, trains, equips and sustains its forces to meet expeditionary operations commitments through the deployment and employment of Air and Space Expeditionary Forces (AEF). The AEF construct was based on our experiences in Desert Shield and Desert Storm and subsequent operations, and meets the requirements outlined in the National Military Strategy and the Strategic Planning Guidance. Consequently, the Air Force is divided into 10 AEFs grouped into pairs, and includes an Enabler Force to support and sustain global expeditionary operations.

To enable the Air Force's AEF construct, the Air Force logistics system is structured and sized to meet the needs of the AEF construct and maintain a surge capability. This installations and logistics (Agile Combat Support Concept of Operations) capability was developed, sized and field tested throughout the 1990s by sustained operations around the world, to include the Balkans, and Operations Southern and Northern Watch. With each operation, the AEF and the supporting logistics system demonstrated they were sized appropriately and flexible enough to meet evolving capability requirements.

The foundation of the Air Force logistics system is comprised of our public depots and the private sector industrial base. Both are synchronized with the AEF battle rhythm and the warfighter's requirements. In addition to meeting requirements such as core and 50/50, we have undertaken a series of initiatives such as public/private partnering that serve the Air Force and the National Military Strategy well. The partnership of the public and private sectors is instrumental in meeting the needs of our day-to-day expeditionary operations while the public depots maintain surge capability to meet demands during periods of high ops tempo.

In addition to our depot and industrial base sizing, the logistics community engages in a comprehensive strategy of pre-positioning War Reserve Material (WRM) around the world. Air Force munitions stored on pre-positioned ships around the globe is just one example of the Air Force's rapidly deployable, flexible and Agile Combat Support system. Ammunition is not the only commodity that must be pre-positioned. WRM is stored in targeted locations for contingency use. The Air Force uses flexible contracts not only for the storage but also for the sustainment of such equipment. These scalable contracts were executed during OIF and OEF and have proven to be quite effective.

The AEFs and their supporting logistics system have been tested for almost 15 years and have proven to be adaptable, flexible and most importantly, effective in accomplishing the Air Force's many missions. The rotation cycle inherent in the AEF complements this by allowing for the logistics system to reconstitute equipment and capabilities, and make units ready for the next deployment in a measured way. In summary, the AEFs have served the Nation well and we will continue to use the AEF construct to organize, train, equip and sustain our forces for the foreseeable future.

Success Stories

The Air Force has experienced many successes throughout OIF and OEF. We flew over 250,000 sorties, opened 36 bases and maintained 31,000 Airmen in the Area of Responsibility (AOR). Additionally, since September 2001, our mobility forces moved over 1.4 million troops and delivered more than 2,200 tons of humanitarian daily rations for OIF and OEF. Our Airmen have been busy and successful.

Of course, these successes are not only the result of Air Force efforts. Congressional help was and is key to providing the funding necessary for force protection, to replenish or replace equipment and commodities lost in combat, and to reconstitute critical capabilities for the combatant commanders. In aggregate, the FY04 supplemental provided $354 million for reconstituting stressed equipment and the FY05 submission requests $826 million for the same.

Supplemental funding helps provide the best and latest equipment to protect our Airmen while they are in harm's way. Funding in FY04 and FY05 will provide over $140 million to equip four AEFs and the deployed Enabling Forces with body armor. FY05 supplemental funding will also provide reconstitution for equipment that was lost in combat. Over $15.9 million in the FY04 supplemental and over $10 million requested in FY05 will reconstitute vital Explosive Ordnance Destruction (EOD) munitions and robots. Up-armored High Mobility Multipurpose Wheeled Vehicle (HMMWV) supplemental dollars fund badly needed protective vehicles for our Airmen in the AOR. Twenty-one million dollars in FY04 funding was provided to buy 127 up-armored HMMWVs and we have requested another $8.6 million for an additional 46 vehicles in the Air Force's FY05 supplemental.

During OIF and OEF, the Air Force opened up 36 bases, 15 of which are still open, with Basic Expeditionary Airfield Resource (BEAR) kits. Congress' support of the

FY03 supplemental provided $330 million for new procurement and replacement of these critical BEAR assets—a capability vital to AEF employment.

Global War on Terrorism (GWOT) funding effectively addressed stress on equipment existing in theater due to aging, wear and tear, and combat loss. Sustainment costs in theater were also well funded. Continued Congressional support was critical to restoring capabilities eroded by our deployed operations.

Continuing Challenges

No success comes without challenges, especially in a rapidly evolving combat environment involving multiple locations worldwide. The cost of resetting the force continues to increase with each passing year of the Global War on Terrorism. Supplemental funding plugged some holes by reconstituting capabilities and covering the O&M increases for our in-theater maintenance requirements. The Air Force works hard at programming for WRM replenishment and reconstituting and pre-positioning equipment. In fact, we programmed close to $1 billion for operations and maintenance of vehicle and support equipment WRM and almost $270 million for munitions across the Future Year Defense Program.

Additionally, we are ensuring we reconstitute capabilities and not just equipment. One example is Fuels Operational Readiness Capability Equipment (FORCE), which is replacing our current deployable fuel storage capability. Our current deployable Vietnam-era Fuels Mobility Support Equipment (FMSE) performed poorly in OIF. FORCE's new modular design reduces the logistics footprint and manpower while it increases throughput and effectiveness at US bases, allied bases, civil airports and captured airfields. The Air Force programmed $87.1 million through FY11 to purchase these highly capable FORCE sets.

One of our biggest challenges in the Air Force is the need to recapitalize and reconstitute our aging aircraft. Aging aircraft continues to increasingly stress our

maintenance personnel, supply systems, and our depots and the defense industrial base. At the start of Operations Desert Shield and Desert Storm, the average age of our aircraft was 17 years. Only 10 years later, at the start of OIF and OEF, our average aircraft age was 22.

The Air Force has chartered a Fleet Viability Board that conducts continuous fleet assessments to determine the viability of our aging weapons systems. This assessment will ensure the Air Force transforms its force structure while maintaining an acceptable level of risk. Our budget submissions include funding required to recapitalize and modernize our equipment as we continue to fly our aging aircraft and bring on future systems.

Critical to maintaining and operating our aging aircraft is Depot Purchased Equipment Maintenance (DPEM) funding. Congress was instrumental in providing needed DPEM supplemental funding in FY03 and FY04. The FY05 supplemental submission requests $183 million to produce 23 aircraft and 15 engines through programmed depot maintenance as well as to fund $22 million in software programming. Additionally, the Air Force continues to experience extensive corrosion and damage due to harsh operating environment and increased ops tempo. DPEM will continue to be an area requiring strong fiscal support as we continue our focused reconstitution efforts.

As we look at reconstituting our capabilities for the future, we must remember that 25 percent of the air expeditionary forces are composed of Air National Guard and Air Force Reserve units and personnel. Guard and Reserve equipment is especially stressed by ongoing operations in the GWOT. We are continually looking for ways to operate in a more integrated and seamless manner, and programmed so that reconstitution and pre-positioning of equipment are addressed as a team requirement across the total force.

Summary

As we employ our Air and Space Expeditionary Forces we must reconstitute not only our equipment, but we must also reconstitute our capabilities—if not also develop new ones. By doing so, the Air Force is prepared to fight today's war, as well as tomorrow's. Strong, timely Congressional support has ensured that reconstitution and pre-positioning of equipment has been funded through the normal budget process but also through much-needed supplementals. The Air Force will continue to emphasize reconstitution and pre-positioning of equipment in our budget submissions as a part of sustaining required capabilities and maintaining our needed readiness posture. Your support in reconstituting the Air Force, as well as the other Services, has been vital in giving our nation's warfighters the capabilities they need to defend the United States and defeat our enemies. Chairman Hefly, Congressman Ortiz, and members of the committee, on behalf of our nation's Airmen, thank you for your continuing support.

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UNTIL RELEASED BY
THE HOUSE ARMED
SERVICES COMMITTEE

STATEMENT OF

LIEUTENANT GENERAL JAN C. HULY

DEPUTY COMMANDANT PLANS, POLICIES, & OPERATIONS

UNITED STATES MARINE CORPS

BEFORE THE

SUBCOMMITTEE ON READINESS

OF THE

HOUSE ARMED SERVICES COMMITTEE

CONCERNING

REQUIREMENTS TO RECONSTITUTE MILITARY EQUIPMENT

ON

APRIL 6, 2005

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
READINESS
SUBCOMMITTEE OF
THE HOUSE ARMED
SERVICES COMMITTEE

Lieutenant General
Jan C. Huly
Deputy Commandant for Plans, Policies, and Operations,
Headquarters, U.S. Marine Corps, Washington, D.C

Lieutenant General Huly is a graduate of the University of California at Berkeley with a Bachelor of Science Degree in Business Administration and was commissioned in December 1969. Upon completion of The Basic School, he was assigned to 1st Battalion, 3d Marines, 1st Marine Brigade, HI; and subsequently to 3d Marine Division, where he served in various infantry command and staff assignments.

Transferred to the Marine Corps Recruit Depot, San Diego, in 1972, he served as a series and recruit company commander, battalion staff officer and Director of the Recruit Administration Center. After completing Amphibious Warfare School in 1976, Captain Huly was assigned to 1st Marine Division at Camp Pendleton, CA, where he served as a battalion staff officer, rifle company commander, and assistant operations officer for the 5th Marine Regiment.

From 1979 to 1980, he commanded the Marine Detachment, USS RANGER. Transferred to Washington, D.C. in 1980, Major Huly served with the Joint Chiefs of Staff. While there, he earned a Master of Arts Degree in Personnel Management from Central Michigan University. Assigned to Headquarters Marine Corps in 1982, Major Huly served in various billets in the Personnel Management Division until 1984.

After graduating from the Marine Corps Command and Staff College in 1985, Major Huly reported to 2d Marine Division at Camp Lejeune, NC, where he made deployments overseas as an executive officer for battalion and regimental landing teams; and subsequently as Commanding Officer for Battalion Landing Team 1/8. He also served as Executive Officer, 2d Surveillance, Reconnaissance and Intelligence Group. Completing the U.S. Army War College in 1990, Lieutenant Colonel Huly was assigned to Headquarters Marine Corps where he served as both the Assistant and Head of the Enlisted Assignment Branch. During Operations Desert Shield and Desert Storm, Lieutenant Colonel Huly was assigned to 2d Marine Division in Saudi Arabia and Kuwait as the Deputy Assistant Chief of Staff for Operations.

From 1992 until 1994, Colonel Huly deployed as the Commanding Officer, 22d Marine Expeditionary Unit and participated in Operations Provide Promise and Deny Flight in Bosnia-Herzegovina and Continue Hope/UNOSOM II in Somolia. He assumed duties as Chief of Staff, II Marine Expeditionary Force on June 1, 1994. He was assigned as the Assistant Division Commander, 1st Marine Division, Camp Pendleton, CA, in 1995. Major General Huly then served as the Deputy Commander, Marine Forces Reserve, New Orleans, LA. From 1998-2000 MajGen Huly served as the Director, Operations

Division, Plans Policies and Operations, Headquarters, U.S. Marine Corps. His last assignment was the Commanding General, Marine Corps Recruit Depot, San Diego and Western Recruiting Region/Deputy Commanding General, Marine Corps Recruiting Command.

Lieutenant General Huly was advanced to his present rank on 2 October 2003 . His decorations include the Legion of Merit with Gold Star, Defense Meritorious Service Medal, Meritorious Service Medal, Navy Commendation Medal, Navy Achievement Medal, and Combat Action Ribbon.

Introduction

Chairman Hefley, Congressman Ortiz, distinguished members of the Subcommittee; it is my privilege to report to you on the actions taken to date to reconstitute the Marine Corps, as well as future reconstitution requirements. Today, we are at war and your Marines are performing well due to their extraordinary courage, dedication, and commitment and our Nation's ability to continue to properly train and equip the force. Marines realize the danger to the Nation, their vital role, the magnitude of their responsibilities, and readily accept the challenge of carrying out these responsibilities.

Marines continue to demonstrate that we are an expeditionary force in readiness. Your continued support has made this possible. The Global War on Terror (GWOT) will be a generational war; therefore, maintaining our readiness, while modernizing and transforming to meet future challenges, is critical to ensuring that the Marine Corps continues to provide the Nation with the capabilities needed to prosecute this war and any future conflicts. On behalf of all Marines and their families, I thank this Committee for your sustained and indispensable support during these challenging times.

CURRENT OPERATIONAL REQUIREMENTS

Currently, your Marines are fully engaged across the spectrum of military operations in prosecuting the Global War on Terror. Since the watershed events of September 11, 2001, the core competencies, capabilities, and emphasis on readiness that the Marine Corps has structured itself around over many years have repeatedly proven their value in the numerous and varied operations this conflict demands.

Previously I have highlighted to Congress that in the early phases of Operation Enduring Freedom (OEF), two forward-deployed Marine Expeditionary Units formed Task Force 58 and projected the first major conventional combat units into Afghanistan – more than 350 miles from its sea base of amphibious shipping. Operation Iraqi Freedom (OIF) witnessed the flexibility of our projection capabilities when a combat ready Marine Expeditionary Force (MEF) of over 70,000 Marines and Sailors was deployed in less than 60 days by multiple means. The significant capabilities of this combined arms force were demonstrated as it attacked more than 500 miles from its off-load areas in Kuwait, rendering ten Iraqi divisions combat ineffective, and seizing half of Baghdad as well as key areas to the north. At the conclusion of major combat operations, strategic plans called for the Marine forces to redeploy and reset for any future contingencies and/or requirements levied by Regional Combatant Commanders (RCCs). In response, Marine forces redeployed to home stations during the summer and fall of 2003. Concurrently, the Marine Corps set about resetting the force, with a particular emphasis on reconstituting prepositioned assets, repairing/replacing equipment and replenishing ammunition.

In October 2003, based on a surge in enemy activity, the Marine Corps received a short-notice tasking to deploy a force of about 25,000 Marines back to Iraq to assume responsibility for the Multi-National Force-West region. Although originally tasked to arrive in April 2004, the I Marine Expeditionary Force (I MEF) arrived in February to accelerate a Relief in Place (RIP) with units pending redeployment. In response to emergent requirements, the 11th , 24th and 31st Marine Expeditionary Units (MEU) deployed to the CENTCOM AOR during the summer and fall of 2004. Each MEU was subsequently employed ashore in support of combat operations in Iraq, and their addition to the I MEF force brought the total USMC strength in OIF II to slightly above 30,000. Of note, this short-notice, substantial increase in USMC commitment to OIF II was made after the Secretary of Defense authorized the Commandant to partially suspend the USMC requirement to maintain forward deployed forces in support of Commander, U.S. Pacific Command. We intend to continue this partial suspension for the foreseeable future.

Recently, we conducted a planned major rotation of our units and headquarters in Iraq, as the II Marine Expeditionary Force replaced I MEF forces. Many of these units had previously deployed to this theater, but we continue to aggressively match our training and equipment to the changing threat. We expect our commitment to Iraq to remain at about 23,000 Marines and Sailors, with the Marine Corps Reserve forces providing about 3,000 of these personnel into 2006. Additive to that force, the 15th MEU is currently in Iraq assisting with stability operations while a number of other units conduct scheduled transfers of authority. Recently the 26th MEU departed for the region as well.

In Afghanistan this past spring we provided, on short-notice, a regimental headquarters and the 22nd MEU. This Marine force, in addition to the infantry battalion and helicopter support already supporting OEF in Afghanistan, was a major element of the combined joint task force assigned to counter a suspected Taliban "Spring Offensive." The success of this force greatly assisted in setting the conditions for the Afghanistan national elections later in the year and in establishment of a secure and stable government. The Marine Corps contribution to OEF in Afghanistan continues with an infantry battalion, elements of two helicopter squadrons, reinforced embassy security provided by Marines from our anti-terrorism battalion, an air operations center and Afghanistan Army training teams.

OIF/OEF Funding

While more work and analysis needs to be done, the Marine Corps has established a consistent pattern of identifying and acquiring the material solutions necessary to sustain the GWOT while continuing to modernize and transform. First, we have embraced the fact that the GWOT has, and continues to have, an impact on our ability to restore our warfighting capability. Second, we have implemented procedures to allow for early identification of estimated funding requirements. Finally, we have adjusted acquisition strategies to maximize procurement efficiencies. As a part of this process we

have worked within the constraints of several planning factors. Most notable amongst these factors is the consistent, sustained deployment of approximately 30 percent of our ground assets and 25 percent of our aviation assets in support of the GWOT. Those deployment rates, when considered in the context of our assumption that most of the ground equipment in theater eventually will be attrited, or beyond economical repair, highlight the potential enormity of our equipment replacement requirements. In some cases, both ground and aviation assets will be replaced through normal, yet accelerated, procurement methods. In other cases, short-term measures will be taken to mitigate loss of capabilities until anticipated modern or transformational capabilities enter the force.

From inception, the incremental operational costs of both OIF and OEF have been principally funded through supplemental appropriations based on Office of the Secretary of Defense guidance. In addition to the supplemental funding requests, the Marine Corps has internally funded ($400M), through the Urgent Universal Needs Statement (UUNS) process, essential warfighting equipment.

A critical piece of ensuring our Marines were as adequately equipped as possible is the Urgent Universal Needs Statement (UUNS) process, which we initiated in 2002. This process has provided a way for our operating forces to identify and forward new requirements for weapons and gear up the chain of command for quick review and approval (usually in less than 90 days). Upon approval by the Marine Corps Requirements Oversight Council (MROC), the Marine Corps and the Department of the Navy have realigned funds as necessary within permitted reprogramming thresholds. When required by reprogramming authority rules, we have forwarded requests that exceed the established reprogramming thresholds to the Congress for approval. The sources for these reprogramming actions have been the occasional investment account asset (resulting from economies or slippage in approved procurement programs); however, far more often the funding was made available due to our decision to defer the full execution of otherwise approved programs to address immediate warfighting needs not otherwise funded in the Department's Supplemental requests.

The MROC, chaired by the Assistant Commandant of the Marine Corps, approved all UUNS warfighting items. Specifically, the UUNS process enabled us to aggressively pursue the addition of armor to all of our HMMWV and MTVR trucks used outside of garrisons within the USCENTCOM Area of Responsibility, and to quickly provide adequate body armor, improved rifle optics, counter Improvised Explosive Device equipment, night vision devices, blue force trackers, personal radios, replacement ammunition, and numerous other warfighting and force protection critical items.

Beginning with the Fiscal Year 2004 Supplemental, the Marine Corps included some resetting the force requirements: $71M for depot maintenance and $139M in procurement of equipment and ammunition. That amount was an initial down payment on a total bill that is still being calculated.

In response to ongoing operations in Iraq and Afghanistan, in the spring of 2004 the Secretary of Defense requested that the Services assess the impact of higher operating tempo and environmental factors on the total inventory of equipment. The Marine Corps prepared its Demand on Equipment analysis on an initial list of 94 high cost/high use items of equipment, including both ground and aviation systems. That analysis identified $2.2B in replace/repair costs, which is included in the Fiscal Year 2005 Supplemental request. Additionally, the Marine Corps requested, through the Fiscal Year 2005 Supplemental, funding to replace equipment taken from our prepositioning stocks (both Maritime Prepositioning Squadron and Marine Corps Prepositioning Program –Norway) ($246M), CONUS stocks ($400M), and to fund urgent warfighting equipment needs ($2.1B). In all instances we assessed our ability to contract for and obligate Fiscal Year 2005 funding to expedite the delivery of this equipment; however, due to industrial base and other execution issues, a portion of our requirements must be deferred until Fiscal Year 2006 and subsequent fiscal years.

At present, the Marine Corps is using the funding provided by the Fiscal Year 2005 Bridge Supplemental ($2.1B) to finance GWOT operations and to procure urgently needed force protection equipment, including vehicle armor kits and aircraft survivability equipment. Today, we are continuing our analysis of resetting the force requirements, those that have been deferred due to execution concerns and those that are continuing to be generated by ongoing operations in support of the GWOT.

Equipment Cross-leveling

A critical aspect of the Marine Corps reconstitution planning effort is our ongoing effort to cross-level equipment across the force, to include equipment required in Iraq and Afghanistan, prepositioned stocks and home station operating/training sets. In order to ensure seamless operational support to OIF and the most cost effective strategy for force rotations, the Commandant directed that equipment necessary to prosecute OIF operations remain in theater for as long as practical. This policy has allowed the Marine Corps to focus our efforts on identifying, attaining and delivering the best equipment possible to forces in theater; equipment tailored to the threat and force requirements. This policy also drastically reduces equipment rotation costs, thus husbanding critical financial resources for other uses.

Although having the best equipment, in the right quantities, in support of deployed units is paramount, the policy of retaining equipment in theater has led, for a myriad of reasons, to home station equipment shortfalls. These shortfalls, if allowed to continue, will have a direct impact on the ability of Marine Forces to train in preparation for known and contingent deployments in support of the GWOT. In order to fill these shortfalls to a level that will enable pre-deployment training, actions have been initiated to cross level equipment throughout the Marine Corps, including both active and reserve components. These actions include the transfer of equipment both to and from active and reserve units. Once

complete, these actions best posture available equipment, not being utilized in theater, to ensure support to Marine Forces home station training and their ability to respond to contingencies.

Sustaining the Current Level of Effort

Your support has ensured our near-term readiness remains strong, even while current demand on the force is high. The entire Marine Corps is supporting the GWOT, and no forces have been fenced. In the past two years, we have gone from a pre-GWOT deployment rotation ratio of just over one-to-two (~6 months deployed / ~14 months home) to our current ratio of just above one-to-one (~7 months deployed / ~7 months home), primarily in our infantry battalions, rotary-wing aviation squadrons, and other high demand units. This means that many Marine units in the operating forces are either deployed or are training to relieve deployed units. In an effort to sustain and regenerate Marine forces for service in Iraq, and in response to lessons learned, the Marine Corps has trained and deployed a sizable number of provisional units. These provisional units have generally fallen into two categories: those units that have cross-trained to enhance capabilities inherent, but secondary, within their mission sets and those units that have trained to a completely new mission set. Cross-training, where clearly the majority of Marine Corps actions have focused, include training artillery, tank and engineer units in security, MP and transportation missions. Complete new missions for units/Marines, while limited but required, has included training engineer units in civil affairs, creating small detachments of foreign military trainers and training a small number of Marines in personnel recovery. While these innovative solutions have helped reduce operational tempo for high demand/low density units in the near term, they have also caused the Marine Corps to evaluate our entire active and reserve force structure in the context of not only the GWOT, but other enduring requirements in as yet unforeseen conflicts. Based on lessons learned, GWOT requirement trends and a need to implement permanent structure changes for relevant capabilities, the Commandant of the Marine Corps initiated a comprehensive force structure review in the spring of 2004.

Force Structure Initiatives

After a complete review, the Commandant approved the general Force Structure Review Group (FSRG) recommendations in late September 2004. Those recommendations defined changes to existing, eliminated unnecessary, and developed new force structure. The new units and increases in certain Military Occupational Specialties that these force structure changes create will help to reduce deployment tempo stress and meet critical capability requirements in areas such as infantry, reconnaissance, explosive ordnance disposal, human intelligence, language specialists and civil affairs. Our current estimate of force structure initiatives' costs from Fiscal Years 2005-2011 totals approximately $1.4B, of which $408M is included in the Fiscal Year 2005 Supplemental request.

The majority of new units created by these initiatives will achieve Initial Operating Capability (IOC) in Fiscal Year 2006, with Full Operating Capability (FOC) by Fiscal Year 2008. MILCON and

equipment procurement requirements will require funding in Fiscal Year 2005 to support IOC and FOC because military construction projects have an average lead time of two to three years, and many of the procurement items have lead times ranging from 18-24 months. A number of the critical MOSs to be augmented will take longer to achieve FOC due to the amount of additional training time required to achieve proficiency (e.g., Explosive Ordnance Disposal training takes four years to accomplish).

Initial fiscal support to implement FSRG recommendations will require Fiscal Year 2005 funding. The Fiscal Year 2006 incremental costs were defined and submitted for congressional review and action on the Fiscal Year 2006 Unfunded Programs List. The Fiscal Year 2007 and out year costs required to complete and sustain the FSRG recommendations are being addressed for inclusion in our baseline budget.

Demand on Equipment

The Global War on Terror usage rates in combat theaters can be three to six times higher than those in other locations. This increases the cost of operations and maintenance beyond what is typically budgeted. During each month of OIF, the Marine Corps incurred equipment maintenance and sustainment related costs of close to $80M a month beyond normal budgeted levels that had to migrate from some other source. Assuming a similar operational tempo, and making adjustments for the current equipment density that is deployed in theater, the Marine Corps can expect in excess of $50M per month of ground equipment maintenance requirements over baseline program, non-combat maintenance needs. In addition to higher usage rates, equipment is being used under extreme conditions. The harsh desert environment and hard driving to evade enemy activity causes damage, which increases the maintenance requirements. Further, the practice of adding armor to unarmored trucks also causes significant stress on vehicle frames and power trains.

Our readiness priority is the support and sustainment of our forward deployed forces. Our supplemental request is based on our best assessment of what is required to address essential wartime readiness tasks, with consideration for what is already in our peacetime operating budget to maintain readiness. Thus, our baseline budget and supplemental request are intrinsically linked.

To date, more than 1,800 principal end items valued at $94.3M have been destroyed. An additional 2300 damaged end items will require depot maintenance.

Ground Equipment: The ground equipment readiness rates of our deployed forces average 95 percent. Our pre-positioned stocks, within both the Marine Corps Preposition Program – Norway and Maritime Prepositioned Shipping, have ensured the sustained readiness of our deployed ground units. We are sustaining our readiness in theater through integration of spare parts and private contractor support. In order to improve our readiness rate in theater, we are coordinating with the Army to leverage their ground depot maintenance capability, and establishing a pool of ground equipment to expedite the

replacement of damaged major end items. The corresponding ground equipment readiness rates for units remaining in garrison are 81 percent.

Aviation Equipment: Our legacy aircraft are performing their assigned missions and are holding up well under increased usage rates. For example, the CH-46 troop transport helicopter has been flown and utilized in support of OIF at 230 percent of its peacetime usage rate. At such rates, maintaining the readiness of our aviation assets presents a considerable challenge.

While utilization rates have increased, the overall trends for deployed aircraft readiness have remained fairly constant. The current aviation equipment readiness rates of our deployed units average 72 percent. In order to improve our readiness rate in theater, we are creating a limited aircraft depot maintenance capability. The overall readiness rating for non-deployed units is currently 69 percent, but trending down, while the utilization has remained constant. This does cause concern because the non-deployed aircraft are required for training replacement forces for forward deployed units.

Due to the lack of an active production line for our CH-46, H-1, and CH-53 platforms, we are managing these assets until the next generation replacement aircraft become available. There are risks associated with this strategy, and we are managing those risks through a variety of approaches, including sustainment and individual component upgrade programs. As an example, the Fiscal Year 2006 Budget requests funding for the CH-46E T-58 and CH-53E T-64 Engine Reliability Improvement Programs; these programs will improve the capability of these engines, reduce maintenance requirements, and address the effects of degradation from GWOT desert operations.

The H-1 Upgrades Program will remanufacture 180 AH-1W and 100 UH-1N helicopters into modern AH-1Z and UH-1Y models. The Fiscal Year 2006 Budget requests $307.5M APN funds to procure 10 UH-1Y/AH-1Z aircraft and $42.0M RDT&E funds to complete the H-1 Upgrades Engineering and Manufacturing Development phase. The program is seeking opportunities to reduce unit cost and minimize the negative impact the remanufacture strategy could have on ongoing military operations. Of note, we anticipate that some number of airframes will be newly fabricated instead of remanufactured in order to reduce the amount of time aircraft would otherwise be out of service and to mitigate the effects of war attrition on aircraft inventory. The optimum mix of remanufactured and newly fabricated aircraft is being evaluated with the results to be reflected in future budget requests.

The Marine Corps reprogrammed Fiscal Year 2005 funds for non-recurring engineering (NRE) to initiate "build new" production of UH-1Ys

The Marine Corps' CH-53E continues to demonstrate its value as an expeditionary heavy-lift platform, with significant assault support contributions in Afghanistan, the Horn of Africa and Iraq. We are requesting funding to take five CH-53E aircraft out of desert storage and refurbish them to replace five aircraft destroyed during operations in support of the GWOT. Concurrently, we are exploring

potential means to accelerate developmental funding for the Heavy Lift Helicopter Replacement (HLR) Program. The Fiscal Year 2006 Budget requests $272M RDT&E to begin the SDD phase of the HLR program that will replace the aging fleet of CH-53E platforms.

The MV-22 Osprey remains the Marine Corps' number one aviation acquisition priority. The Osprey's increased range, speed, payload, and survivability will generate transformational tactical and operational capabilities. Ospreys will replace the aging Marine fleets of CH-46E and CH-53D helicopters beginning in Fiscal Year 2005, which will provide both strategic and tactical flexibility to meet emerging threats in the GWOT. Utilization far above peacetime rates, and the physical demands of continuous operations in the harsh conditions of Iraq and Afghanistan, are accelerating the deterioration and increasing operating costs of the legacy aircraft that the MV-22 will replace. These factors make a timely fielding of the MV-22 critical. The Fiscal Year 2006 Budget request includes $1.3B for nine MV-22s, trainer modifications and retrofits and $206.4M for continued development, testing and evaluation.
Marine Aviation Command and Control Systems, specifically our TPS-63 and TPS-59 radar systems, have experienced accelerated utilization and degradation due to the GWOT, and there are no open production lines. Acceleration of the G/ATOR and HELRASR transformational programs is a component of our reset requirements.

Ammunition Requirements

Ground Ammunition: The Marine Corps' ground ammunition budget fully supports the major elements of the War Reserve Munitions Requirement and training ammunition in the near-term but assumes some risk in Strategic Readiness Requirements such as Norway prepositioning, Homeland Defense, and standing contingency forces.

The Marine Corps' Fiscal Year 2005 Supplemental funding includes munition items. Machine gun ammunition, demolition items, 40mm grenade, and 120mm Abrams tank cartridges continue to be high use items. Additionally, the Marine Corps continues to modernize its conventional ammunition capability when possible. .

Aviation Ordnance:

Hellfire: The Hellfire missile continues to be expended in support of current GWOT operations. The Marine Corps modernization efforts addressed in the Fiscal Year 2005 Supplemental request an additional $43M to replenish inventories. This request is even more critical following the termination of the Joint Common Missile program.

LAU-7 Launchers: Engineering teams have tested 1036 LAU-7 launchers and found 12.5 percent cracked (as of 19 Dec 04), and 53.2 percent worn beyond limits. Current failure rate would begin to cause non-mission capable F/A-18 aircraft in 2006. Support for the Marine Corps' Fiscal Year 2005

Supplemental funding request for $11M for LAU-7's will provide long lead items, ensure deliveries in 2006 and maintain F/A-18 aircraft readiness.

Prepositioning Programs Reset Actions, Requirements, and Funding

OIF provided an opportunity to employ maritime prepositioning as it was envisioned. The offloading of eleven ships in 16 days through one port was the second largest MPF operation in history, providing most of the equipment used by Marines in OIF I. The equipment readiness on the first squadron was 98.5 percent, while the second squadron was 99.1 percent. After OIF I, and concurrent with the reorganization to "mirror image" our squadrons, we began reconstituting downloaded ships even as we continued to support ongoing operations. Equipment and supplies not used to reconstitute MPSs in Kuwait and not required by engaged forces were brought to Blount Island Command (BIC) and put in general support of MPF Maintenance Cycle 8 (MMC-8), which commenced with the reconstitution of MPSRON-1 beginning in April 2004.

MPSRON-1 completed reconstitution and MMC-8 in March 2005 and is ready to support the operational requirements of the Regional Combatant Commanders. The squadron's major end item maintenance readiness is 99.6 percent.

In March-April 2004, two ships from MPSRON-2 and maritime prepositioning equipment and supplies from Blount Island Command were used to support Marines still conducting operations in Iraq. All of MPSRON-2's maritime prepositioning equipment and supplies have been downloaded. Four of its ships are in the Common-User Sealift Pool (CUSP), and one is conducting Extended Maritime Interdiction Operations (EMIO) in direct support of Commander, U.S. Pacific Command. Ships from MPSRON-2 will rotate through MMC-8 from June 2005 - April 2006.

MPSRON-3 was reconstituted in Kuwait from September 2003 - February 2004 and will rotate through MMC-8 from March 2006 - April 2007. The squadron's current major end item maintenance readiness is 98.8 percent .

Marine Corps Prepositioning Program - Norway (MCPP-N). The Marine Corps is in the process of transforming its Norway Air-Landed Marine Expeditionary Brigade (NALMEB) prepositioning program into the MCPP-N. The prepositioning objective for MCPP-N is projected to be roughly equivalent to the NALMEB prepositioning objective, while its mission is transforming from a Cold War paradigm to an emphasis on forward deploying war reserve material prepositioned stocks in general support of all Regional Combatant Commanders.

After OIF I, MCPP-N transferred major end items to the MPF program in support of the back load of prepositioning ships during MMC-8. In support of OIF II, the Marine Corps deployed approximately five percent of MCPP-N's major end items. On 1 March 2005, the Marine Corps directed the redistribution of 25.6 percent of MCPP-N's readiness-reportable major end items to units preparing to

deploy in support of the GWOT as part of our equipment cross-leveling plan. The program's current major end item maintenance readiness is 99.8 percent, and it is currently at 80.1 percent of its overall major end item's prepositioning objective. Its on-hand readiness for reportable end items will decrease to 38.2 percent when ongoing redistributions are complete.

The Marine Corps is planning the reconstitution of MPSRON-2 and MCPP-N. The only capability that will prove difficult to reconstitute in the short term is ground equipment. The current projected attainment for major end items for MPSRON-2 is 44 percent overall, and 32 percent for readiness-reportable equipment. The foundation of our reconstitution efforts is the additional Procurement Marine Corps (PMC) funding from the Fiscal Year 2005 Supplemental. Our Fiscal Year 2005 Supplemental request contained PMC funding to procure the majority of those MPSRON-2 and MCPP-N major end item shortfalls that are executable in Fiscal Year 2005. When approved, and upon completion of fielding, the projected attainment for major end items will be 75 percent for MPSRON-2 and 87.5 percent for MCPP-N. The Marine Corps currently projects we will require an additional $243M in PMC and O&MMC dollars to complete the reconstitution of MPSRON-2 and MCPP-N; however, the analysis to support an additional funding request is ongoing.

Modernization and Transformation

As we look to the future, the requirements for Naval forces to maintain presence, engage allies and potential coalition partners, build understanding and operational relationships, relentlessly pursue terrorist organizations, and project sustainable forces ashore for a wide variety of operations will increase. While we continue to focus our efforts on sustaining the current requirements for the GWOT, we must not sacrifice our modernization and transformation initiatives in the process. Our modernization and transformation accounts have been bearing the unfunded costs associated with sustaining the GWOT. The Fiscal Year 2005 Supplemental will relieve some of this pressure by beginning to address the recapitalization of our forces. Our modernization and transformation initiatives must plan for the procurement of replacement equipment that will enable our Corps to be ready for future conflicts and contingencies.

While there are numerous modernization and transformation initiatives underway, the following provides a brief update of several critical programs and corresponding funding status. Other modernization or transformational initiatives have been covered earlier in this statement or in previous testimony to this and other Committees.

Maritime Prepositioning Force (Future) (MPF(F)): These future Maritime Prepositioning Ships will serve a broader operational function than current prepositioned ships, creating greatly expanded operational flexibility and effectiveness. The Fiscal Year 2006 Budget request includes $66M of RDT&E

funds to develop technologies to support future sea basing needs in MPF(F). The first MPF(F) ship is planned for Fiscal Year 2009 with advanced procurement award scheduled in Fiscal Year 2008.

Landing Craft Air Cushion (LCAC) Service Life Extension Program (SLEP): Our fleet LCACs saw dramatically increased operational tempo supporting worldwide operations during the past year, underscoring the need for the LCAC SLEP. The Fiscal Year 2006 Budget request includes $111M for SLEP of six craft.

MAKIN ISLAND (LHD 8): LHD 8 is the last ship of the LHD 1 Class of big deck amphibious ships, which represent a critical element of the Navy and Marine Corps future in expeditionary warfare. In accordance with Congressional direction to incrementally fund LHD 8, the Fiscal Year 2006 Budget requests $198M for the last increment in the continued construction of LHD 8.

LHA(R): The Fiscal Year 2006 Budget requests $150M of advance procurement funds for LHA(R) to support an accelerated ship construction start in Fiscal Year 2007.

The SAN ANTONIO (LPD 17): This class of amphibious transport dock ships is optimized for operational flexibility and designed to meet Marine Air-Ground Task Force lift requirements and represents a critical element of the Navy and Marine Corps future in expeditionary warfare. The Fiscal Year 2006 Budget includes $1.3B to fully fund the construction of the eighth ship of the class.

Vertical Unmanned Air Vehicle (VUAV): The Fiscal Year 2006 Budget requests $9.2M to evaluate the Eagle Eye UAV, currently being developed by the United States Coast Guard in connection with its Deepwater Program.

Conclusion

In closing, I would like to again thank the members of the Committee for their continuing support of the Marine Corps, and for the opportunity to discuss our current readiness and its inextricable link to our resource requirements. The young men and women of your Corps are doing an exceptional job in OIF and OEF. Their accomplishments are a direct reflection of your continued support and commitment to maintaining our Nation's expeditionary warfighting capability. We are in the midst of challenging times, faced with some clear choices, and still others that require further study—but none of the choices we face will have an inexpensive, easy path to success. However, we go forward with confidence because Marines have the best training and equipment in the world, thanks to the support of this Committee, and the Nation we proudly serve. We must continue to inspire, train, and equip them for success. Our Fiscal Year 2005 supplemental request and our Fiscal Year 2006 budget work together to address our essential operational and maintenance, procurement, modernization and transformation requirements to sustain our readiness, while providing opportunity for investment in the future of our Corps. On behalf of all Marines and their families we greatly appreciate the unwavering support of Congress in the sustainment and readiness of the Marine Corps.

CBO TESTIMONY

Statement of
Douglas Holtz-Eakin
Director

The Potential Costs Resulting from Increased Usage of Military Equipment in Ongoing Operations

before the
Subcommittee on Readiness
Committee on Armed Services
U.S. House of Representatives

April 6, 2005

This document is embargoed until 2:00 p.m. (EDT), Wednesday, April 6, 2005. The contents may not be published, transmitted, or otherwise communicated by any print, broadcast, or electronic media before that time.

CONGRESSIONAL BUDGET OFFICE
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Notes

Unless otherwise indicated, all dollar figures in this analysis are in 2005 dollars, and all years referred to are federal fiscal years, which run from October 1 to September 30.

Numbers in the text and tables may not add up to totals because of rounding.

This statement is nearly identical to a March 18, 2005, letter by the Congressional Budget Office to the Honorable Ike Skelton. See www.cbo.gov.

Mr. Chairman, Congressman Ortiz, and Members of the Subcommittee, I appreciate the opportunity to discuss the potential costs resulting from increased usage of military equipment. The United States has maintained substantial military forces in Iraq and Afghanistan operating at relatively high rates since hostilities began in Iraq in March 2003. As a consequence, the services are discovering that many of the hundreds of thousands of pieces of equipment that have been used in operations in Iraq and Afghanistan are in need of replacement or repair. At the request of the Ranking Member of the House Committee on Armed Services, the Congressional Budget Office (CBO) attempted to determine the number and types of equipment being used by the military services at higher-than-normal levels in Iraq and Afghanistan and to estimate the potential resource implications of the resulting need to repair or replace significant portions of that equipment.

On the basis of information from the services, CBO ascertained that Army and Marine Corps equipment in-theater is, in general, being used at rates that are many times greater than those typical of peacetime. In particular, trucks from those two services are being driven roughly 10 times more miles per year than has been the average over the past several years. The Army's and Marine Corps' combat vehicles—such as tanks and light armored vehicles—are being driven at rates roughly five times those of peacetime. Finally, those two services' helicopters are being flown at roughly twice peacetime rates.

In contrast, the effect of operations in Iraq and Afghanistan on the Navy's and Air Force's assets is much less dramatic than on those of the Army and Marine Corps. CBO found that the greatest increase in activity could be attributed to the Navy's ships stationed in the Iraqi theater, which have been steaming roughly 40 percent more days per year as they would in peacetime. In general, increases in operating tempo were much smaller for most Air Force and Navy fixed-wing aircraft.

CBO used two methods to estimate the additional cost that would accrue from the increased usage of the services' equipment compared with the normal peacetime cost. Those two methods—one a "top-down" and the other a "bottom-up" approach—yielded roughly comparable estimates of the annual costs to replace or repair worn equipment (see Table 1). All told, CBO estimates that the cost from wear and tear on equipment resulting from operations in 2005 could be on the order of $8 billion.

Some of the problems with worn-out equipment that the services are now just beginning to address are the result of operations in previous years. Activity in the Iraqi theater began in earnest in mid-2003 and has continued at a relatively high pace to the present. Thus, in addition to bills for activity in 2005 that will come due at the end of the year, costs have accrued for repairs and replacements stemming from operations in the second half of 2003 and all of 2004. The services have received funds to cover some of the costs resulting from activity in 2003, 2004, and 2005, but not enough to cover all of the costs. CBO calculates, on the basis of its estimates and funding pro-

Table 1.

CBO and Service Estimates of Costs Related to Equipment Stress and Loss

(Billions of dollars)

	CBO "Top-Down" Method		CBO "Bottom-Up" Method[a]		
	2005 Only	Unpaid Costs Accrued Through 2005	2005 Only	Unpaid Costs Accrued Through 2005	Service Estimate of Unpaid Accrued Costs
Army	5.3	11.6	4.5	7.9	9.2
Marine Corps	1.1	2.7	1.1	2.2	1.7
Air Force	1.8[b]	3.9[b]	1.5	2.8	0.9
Navy	n.a.	n.a.	0.3	0.3	1.0
Navy aviation	0.2	0.2	0.1	0.1	0.4
Total	**8.4**	**18.4**	**7.4**	**13.2**	**12.8**

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. Based on midpoint of range of estimates.

b. Average of estimates based on aircraft lifetime of 30 years to 40 years.

vided to the services that it can identify in supplemental appropriations enacted in 2003 and 2004, that the services will have a collective backlog of expenses in 2005 of $13 billion to $18 billion resulting from equipment stress and loss. More than half of those costs are attributable to wear on Army equipment, with the Marine Corps and the Air Force accounting for most of the remaining costs.

The services also developed, at the request of the Secretary of Defense, their own estimates of the total funds required to correct equipment problems that accumulated through usage in the war on terrorism, which includes operations in Iraq and Afghanistan. The Army's and the Marine Corps' estimates are generally comparable with CBO's (see Table 1). In contrast, CBO's estimates for Air Force requirements are appreciably higher than the service's estimate. And with regard to total unpaid costs associated with Navy equipment, CBO's estimate is on the order of $400 million, whereas the Navy's estimate is significantly higher at $1 billion.

The supplemental funding request submitted by the Administration in February 2005 included funds to address the services' equipment-stress problem. The narrative accompanying the supplemental request indicates that $12 billion is included to "recapitalize equipment, conduct depot maintenance, and procure new and replacement

equipment." That requested amount correlates well with the services' estimates of their accrued costs.

CBO estimates that once the backlog of accumulated maintenance, repair, and replacement requirements has been met, the annual funding needed to address the costs of wear to equipment should drop. As long as forces and operations are maintained at the 2005 level, annual funding of about $8 billion will be needed. But if the pace of operations and level of forces gradually decrease to roughly 20 percent of current levels, then annual funding requirements could also drop to somewhat less than $1 billion.

Introduction

The United States continues to maintain substantial forces in Iraq and Afghanistan in pursuit of the war on terrorism. As a consequence of the duration of the deployment and the pace of activity in those countries, the military services are becoming increasingly concerned about the effects that those sustained operations are having on their equipment. The supplemental appropriations for 2004 approved by the Congress included substantial funds for maintenance and repair of equipment worn or damaged in Iraq and Afghanistan, and the recently submitted request for supplemental funds for 2005 includes additional amounts to repair and replace worn-out or damaged equipment.

The Ranking Member of the House Armed Services Committee asked the Congressional Budget Office to provide the committee with an assessment of the magnitude of the problem—regarding both the numbers of systems affected and budgetary implications—of stress and wear on the military services' equipment resulting from operations in Iraq and Afghanistan. Specifically, the committee asked CBO to determine the types and amount of equipment being used at high rates in operations overseas. The committee also requested that CBO determine the potential resource implications of the increased need for equipment repair and replacement caused by potential reductions in the remaining operational lifetime of the affected equipment.

Data Requirements

To fully answer the committee's request, CBO would need extensive and detailed information concerning the services' equipment and its usage in both peacetime and current operations related to the war on terrorism.[1] Those data include:

1. Although the committee's request referred specifically only to operations in Iraq and Afghanistan, CBO considered the effect of all operations that are part of the war on terrorism on the services' equipment. In addition to Operation Iraqi Freedom, which accounts for most operations that are stressing the services' equipment, both Operation Enduring Freedom in Afghanistan and Operation Noble Eagle (which includes operations in the United States) also contribute to the services' increased pace of operations and corresponding equipment use.

- The peacetime operating tempo (OPTEMPO) for each piece of equipment and associated funds provided in peacetime for spare parts and maintenance activity to support that level of usage, to determine the amount of additional funding needed because of increased usage;[2]

- The number and type of equipment in-theater as well as the rate at which it is being used; and

- The nominal operating lifetime that the services assume for their equipment, to determine the impact of increased or accelerated aging of specific pieces of equipment when they are used at very high rates in the Iraqi and Afghani theaters.

In attempting to answer the committee's request, CBO was not able to gather data that were consistent among the services and complete in all areas. In the case of the Army, CBO was unable to determine the specific number and type of equipment in-theater in 2004 or the usage rates for each type of Army equipment. The Marine Corps, in contrast, provided CBO with information concerning quantities, usage rates, or both for most of the roughly 100 types of its equipment in use in Iraq. The Navy provided CBO with some information on the number and types of aircraft in-theater and their usage rates, as well as general information concerning ships involved in Operation Iraqi Freedom (OIF) in Iraq and Operation Enduring Freedom (OEF) in Afghanistan. The Air Force did not provide CBO with detailed data on the quantity and operating tempo of its equipment in the Iraqi and Afghani theaters.[3]

CBO's Approach

The variation among the services in level of forces in-theater and in the quality and quantity of data regarding those forces led CBO to treat the analysis of each service's equipment separately. Moreover, CBO used two different methods to attempt to gauge the magnitude of the resource implications of stress on equipment.

Differences Among the Services. The services vary greatly in their level of involvement in the ongoing operations associated with the war on terrorism. At the end of 2004, the Army had by far the greatest number of personnel—and pieces of equipment—deployed in Iraq and Afghanistan, with roughly 150,000 personnel in Iraq and Kuwait and an additional 14,000 personnel in Afghanistan.[4] Those personnel were assigned to the equivalent of slightly more than five divisions and accompanying support units. Those large numbers of personnel needed equally large numbers of equipment—more than 35,000 trucks and some 1,700 helicopters, to cite two exam-

2. The rate of usage—or operating tempo—is typically measured in miles driven per vehicle per month or year, or hours flown per aircraft per month or year.

3. References to operations in Iraq and Afghanistan and surrounding theaters are meant to encompass all activities included in OIF and OEF.

4. The number of Army personnel in Iraq and Kuwait was increased temporarily at the end of calendar year 2004 to ensure security for Iraqi elections in January 2005.

ples. The Marine Corps maintains a much smaller number of troops in-theater—roughly 30,000—and as a consequence much less equipment. (For example, the Marine Corps had roughly 5,000 trucks in Iraq compared with the Army's 35,000.)

In contrast, the Air Force and the Navy, although supporting operations in Iraq, had far fewer pieces of equipment actually based there. Both services maintained support equipment in-theater—for example, the equipment associated with the Air Force Red Horse airfield maintenance and construction teams and Navy SeaBee units. But the number and value of the Air Force and Navy equipment based in-theater—other than aircraft—are small relative to that maintained in-theater by the Army and Marine Corps. Consequently, CBO chose not to include that equipment in its analysis.

Instead, CBO focused on the increased usage of and stress on those types of Navy and Air Force aircraft that have participated in OEF in Afghanistan and OIF in Iraq and on Navy ships and submarines that are stationed in the Iraqi theater. Although major equipment normally associated with those services—surface ships, submarines, and many fighter aircraft—were not heavily used in 2004, some Air Force and Navy aircraft and some Navy ships did experience significantly more use in 2004 in support of OEF and OIF, as well as in Operation Noble Eagle providing homeland defense of the United States. In short, CBO estimated the effect of increased demands associated with the war on terrorism on all Army and Marine Corps equipment used in the Iraqi and Afghani theaters, on Navy ships and submarines stationed in those theaters, and on Navy and Air Force aviation used to support OEF and OIF as well as the war on terrorism worldwide.

Two Different Methods. CBO used two different methods to estimate the increase in resource requirements compared with peacetime that would result from the increased use of equipment in conducting the war on terrorism. The first approach—referred to as the "top-down" approach—calculated the increased depreciation in the value of the services' equipment that would result from increased usage rates. That approach assumes that all Army equipment in very broad categories, such as helicopters, experiences the same increase in OPTEMPO while deployed in the Iraqi and Afghani theaters. Thus, no variation in usage among individual types of Army trucks, helicopters, or tracked vehicles is taken into account. (In contrast, each individual type of Marine Corps equipment, Air Force aircraft, and Navy aircraft is treated independently.) The increased OPTEMPO is assumed to accelerate the aging of all equipment—either by type in the Air Force, Navy, and Marine Corps or for each category in the Army—at the same rate, thus increasing the need for equipment replacement over that experienced in peacetime. That approach yields insight into the costs of replacing or rebuilding equipment but not into the costs of maintaining it. That approach also requires the least data on specific types of equipment.

The second method is more detailed and attempts to calculate, for each type of equipment, the increased annual cost compared with peacetime for sustainment, maintenance, repair, and replacement attributed to increased usage. Although that method—

referred to as the "bottom-up" approach—would yield a more complete picture of the costs associated with increased equipment usage, it also requires much more extensive data. For each type of individual system class or model—such as an Abrams tank, a five-ton truck, or a UH-60 Blackhawk helicopter—CBO would need information on peacetime usage rates and per-hour or -mile costs for sustainment, maintenance, repair, and replacement. In those cases in which not all the necessary data were available for every system, CBO had to make assumptions or rely on analogies.

A detailed description of the analysis of equipment stress using each method, and the ensuing results, follows.

A Top-Down Approach to Estimating the Cost of Wear on Military Equipment in Ongoing Operations

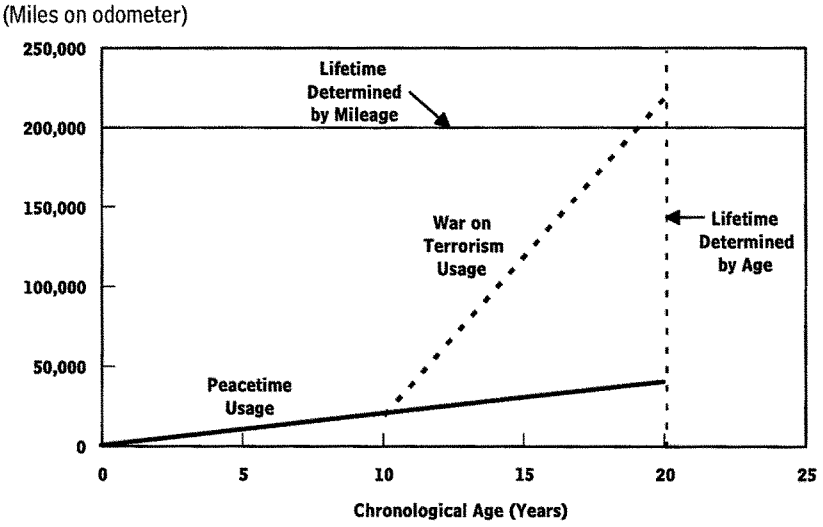
This approach estimates the annual cost of excessive wear on equipment used in the war on terrorism on the basis of the premise that equipment operated at a higher-than-normal tempo must be replaced sooner than it would be under normal conditions.[5] In particular, CBO assumed that equipment used at a higher-than-normal rate will age at a rate that is proportional to its usage. For example, using a piece of equipment at five times the normal rate will make it age five times faster than normal. CBO also assumed that pieces of military equipment have a fixed lifetime and must be replaced at the end of that lifetime to maintain the readiness of U.S. military forces. Thus, if the Army's tanks have a nominal lifetime of 30 years, one-thirtieth of the total inventory would need to be replaced annually to maintain the average age—and the readiness—of the tank fleet at a constant level. In short, this approach assumes that increased usage accelerates the depreciation of the military's equipment in-theater and that to maintain the military's capability, an investment in new equipment must be made to offset that accelerated depreciation.

This method for estimating stress on equipment could overestimate some costs and underestimate others. First, just because a piece of equipment has been used intensively for one year does not necessarily mean that its remaining life has been reduced by more than one year. The peacetime usage rates of some pieces of military equipment are sufficiently low that usage at rates that are several times higher might not seriously stress a piece of equipment. For example, Army data indicate that the ser-

5. For the Army and the Marine Corps, almost all expenses related to excessive wear will result from operations in the Iraqi and Afghani theaters. Navy and Air Force aircraft might experience increased usage rates attributed to Operation Noble Eagle, conducted primarily in the United States, as well as for operations in Afghanistan and Iraq.

Figure 1.

Illustrative Relationship Between Vehicle Usage, Age, and Lifetime



Source: Congressional Budget Office.

vice's medium trucks drove an average of about 2,000 miles per year for the past eight years in peacetime operations. Based on the Army's goal of keeping an individual truck in its medium fleet for a maximum of 20 years, an average truck would have been driven a total of 40,000 miles during its lifetime—less than half as much as some commercial trucks are driven in one year.[6] Thus, based on the Army's goals, the factors that limit the useful lifetime of an Army truck seem to be chronological age and technological obsolescence rather than total mileage (see the vertical line in Figure 1). If a 10-year-old Army truck with 20,000 miles on its odometer was shipped to Iraq and used at 10 times its peacetime rate of 2,000 miles per year, it would be 11 years old and have 40,000 miles on its odometer at the end of one year in Iraq. According to the method used by CBO in its analysis and by the services as the basis for some of their estimates of stressed equipment costs, that truck would be a candidate for replacement at the end of one year in Iraq because it would have aged 10 years during that year and reached the end of its 20-year lifetime. But if industry standards are more indicative of the mileage that a truck can reasonably expect to be driven, then a

6. Department of Energy, *Norcal Prototype LNG Truck Fleet: Final Results* (July 2004).

truck in Iraq could be driven 20,000 miles per year—10 times the peacetime rate—for up to eight years and still be below an illustrative lifetime mileage limit of 200,000 miles (see Figure 1). Thus, CBO's estimate could overstate the services' requirements. However, it is unlikely that carriers in the private sector keep their trucks in service as long as the Army does. As of April 2004, the average age of the Army's almost 90,000 medium trucks was 19 years. Thus, a significant number of the Army's trucks in Iraq and Afghanistan could already be more than 10 years old upon arrival in-theater. Usage at several times the usual peacetime rate may, indeed, push those trucks closer to the end of their useful lives.

A thorough analysis of the level of stress experienced by each type of system being used in Iraq and Afghanistan would require detailed knowledge of the status of each piece of equipment—such as its age and usage history, its design standards, and its usage in-theater. By adopting a top-down approach, CBO avoided the need for detailed data that are not available on the hundreds of thousands of individual pieces of equipment that the services have deployed to Iraq by generalizing the effects of increased usage on entire categories of equipment in the case of the Army and on each type of equipment for the other services.

Because CBO assumed that increased usage in-theater would yield a proportional increase in aging—using a piece of equipment at five times the peacetime rate would result in five years of aging for every year in-theater—CBO's analysis did not take into account any additional aging that could result from operating in the harsh conditions of Iraq and Afghanistan. The dust, sand, and heat might tax engines and rotors, and heavy loads could strain axles and transmissions. And it is conceivable that those conditions could lead to a more-than-linear increase in aging and that usage at five times the peacetime rate could result in more than five years of aging in one year.[7] CBO, however, has no analytical basis for estimating the increased stress caused by harsh conditions and so may have underestimated, in some cases, the actual stress from operations in the Iraqi and Afghani theaters.[8]

CBO also estimated the value of equipment that is projected to be damaged beyond repair. The amount of equipment that has had to be replaced annually because of excessive wear or damage has averaged roughly 2 percent for most types of Army

7. In some cases, trucks are carrying heavier loads than those typical of peacetime use. The weight of the armor that has been added to protect against mines, car bombs, and other explosive devices has also increased the wear and tear on trucks used in Iraq.

8. Although the services may have observed the effects of harsh desert conditions on their equipment, they have not, to CBO's knowledge, derived a quantitative relationship between increased aging and operating in the desert that could be used in CBO's analysis.

equipment in-theater.[9] CBO assumed that the 2 percent annual rate of "total" loss would remain constant and apply to all types of Army and Marine Corps equipment. CBO also assumed that the Air Force and Navy would not lose any aircraft or ships.

To estimate the cost resulting from the increased usage and loss of equipment associated with the war on terrorism, CBO calculated the increase, relative to peacetime, in the value of equipment that would need to be replaced because of loss or accelerated aging. Because types and quantities of equipment, as well as the availability of data concerning equipment and usage rates, varied among the services, CBO evaluated the cost of equipment stress related to the war on terrorism separately for each service.

Current Levels of Equipment Stress

CBO estimated the cost of wear and tear on equipment for all four services that would accrue during operations in 2005 on the basis of the rate of usage experienced in 2004.[10] CBO assumed that the Army and Marine Corps would maintain the same level of forces in Iraq and Afghanistan as were stationed there at the end of 2004. (CBO's evaluation of Navy and Air Force equipment using the top-down approach was done on a fleetwide basis and was, therefore, independent of the level of Navy and Air Force personnel deployed in Iraq and Afghanistan.)

The Army accounts for the majority of the forces and equipment in Iraq and Afghanistan and has maintained roughly the same level of forces in-theater since operations in Iraq began in earnest approximately halfway through 2003. The Marine Corps has one Marine Expeditionary Force and parts of one division in Iraq and maintains considerable air and ground equipment in-theater. The Air Force and the Navy have a much smaller presence in-theater than the other two services but still play a role in current operations. Each service's equipment and its usage in-theater will be discussed in turn.

Army Equipment Requirements. The Army has maintained 100,000 to 150,000 personnel in Iraq, Kuwait, and Afghanistan assigned to the equivalent of four to six divi-

9. Two percent of the Army's missile systems, tracked vehicles, support equipment, and small arms returning from the Iraqi and Afghani theaters were damaged or worn beyond repair. Slightly higher loss rates—3 percent and 5 percent, respectively—applied to Army aviation and communication equipment. The Army's wheeled vehicles suffered appreciably higher loss rates of 12 percent. Because CBO's top-down analysis takes into account the much greater replacement rate that trucks would experience because of their high wartime OPTEMPO, CBO assessed the same 2 percent additional replacement rate for trucks that are beyond repair due to excessive wear or damage.

10. Usage rates for 2004 were not available for some types of Army equipment or for Navy aircraft. CBO assumed that usage rates for Army equipment in 2005 would equal those experienced in the last half of 2003 and that usage rates for Navy aircraft in 2005 would equal an average of the rates for 2002 and 2003.

Table 2.

Army Equipment Use In-Theater in 2005

	Value of Equipment (Millions of dollars)		Assumed	OPTEMPO Ratio	Increase in Annual Depreciation	
	In Divisions	Outside Divisions	Lifetime (Years)	(Wartime/ peacetime)	Percent	Millions of Dollars
Aviation	4,150	8,980	20	2	5	660
Tracked Vehicles and Other Weapons	9,540	0	30	5	13	1,270
Trucks	2,110	1,930	20	10	45	1,820
Other	4,630	0	20	5	20	930
Total	**20,430**	**10,910**	**n.a.**	**n.a.**	**n.a.**	**4,680**

Source: Congressional Budget Office based on data from the Army.

Note: OPTEMPO = operating tempo; n.a. = not applicable.

sions and various other units from mid-2003 through the present.[11] CBO estimated the total value of the Army's combat equipment in the Iraqi and Afghani theaters by assuming that recent force levels, excluding the pre-election buildup, can be represented by five divisions—three heavy and two light. The value of the equipment associated with the divisions totals about $20 billion, of which $4 billion is aviation equipment; $10 billion is ascribed to tracked vehicles and other weapons; $2 billion is associated with trucks; and the remainder is associated with electronic equipment, generators, material-handling equipment, and other types of equipment (see Table 2). In addition, CBO took into account $9 billion worth of aviation equipment in-theater that is not assigned to the divisions, as well as $2 billion worth of trucks.

CBO treated those collective groups of equipment separately because of differences in assumed lifetime and increases in OPTEMPO relative to peacetime (see Table 2).[12] Specifically, CBO assumed that tracked vehicles would have a nominal lifetime of 30

11. The number of Army personnel in-theater increased during the transition period between unit rotations and then declined after the transition was completed. In addition, the number of Army personnel in the Iraqi theater (which includes Kuwait) was increased in December 2004 to ensure security for the elections at the end of January 2005. Those numbers are expected to decline in the spring of 2005.

12. The ratio of wartime OPTEMPO to peacetime OPTEMPO is a gauge of equipment use above peacetime levels. For example, a wartime-to-peacetime OPTEMPO ratio of 1.25 indicates that the system is used 25 percent more in wartime than in peacetime. A wartime-to-peacetime OPTEMPO ratio of 5 indicates a wartime usage at five times the peacetime rate and an increase in usage of 400 percent.

years, and all other types of equipment would be replaced every 20 years. Increases in OPTEMPO for equipment in-theater also varied greatly by equipment type. Army helicopters have been experiencing usage rates roughly twice peacetime rates, while tanks and other tracked vehicles have been experiencing usage at roughly five times peacetime activity levels. The Army's trucks, according to some reports, are being run at roughly 10 times peacetime rates and have been experiencing some of the worst problems attributed to wear and tear. (CBO assumed that all other Army equipment was being used at the same increased rate as tracked vehicles—five times peacetime rates.) Those assumptions resulted in slightly increased replacement rates for Army helicopters, tracked vehicles, and other equipment—5 percent, 13 percent, and 20 percent increases, respectively—and replacement rates for trucks that were 45 percent higher than in peacetime.

CBO estimates that the Army would need to invest roughly $4.7 billion annually to maintain the current force levels and OPTEMPOs in Iraq and Afghanistan. The largest investments would be in trucks and tracked vehicles, which are experiencing some of the highest increases in OPTEMPOs relative to peacetime. Lesser amounts would be needed to replace helicopters and other equipment.

In addition to replacing equipment because of increased wear, the Army would have to replace equipment lost during operations. Based on the assumed annual loss of 2 percent, the Army would need to spend an additional $600 million annually to replace lost equipment.

Marine Corps Equipment Requirements. As of the end of 2004, the Marine Corps had approximately 30,000 personnel deployed in the Iraqi theater with associated equipment worth more than $6 billion. But in contrast with the Army's assets, which were dominated by trucks and tracked vehicles, aviation assets accounted for almost two-thirds of the total value of Marine Corps equipment (see Table 3). Using data provided by the Marine Corps, CBO was able to evaluate the wear and tear on each type of equipment individually. Although there was considerable variation in the rate of usage among the various Marine Corps systems, the overall patterns were similar to those of the Army systems. Helicopters in-theater were used at rates that averaged roughly twice that of peacetime, whereas trucks experienced the highest rate of usage—11 times as high as in peacetime. The Marine Corps' tracked vehicles and other weapons, including wheeled light armored vehicles (LAVs), experienced wartime OPTEMPOs roughly eight times those experienced in peacetime—somewhat higher than those of the Army's tracked vehicles.

Because the Marine Corps has fewer forces in Iraq and Afghanistan than the Army does, its annual costs for depreciation caused by wear and tear and for losses in the theater are also much lower than the Army's, according to CBO's estimates. In total, the Marine Corps would need to invest roughly $1 billion annually to replace the

Table 3.

Marine Corps Equipment Use In-Theater in 2005

	Value of Equipment (Millions of dollars)	Assumed Lifetime (Years)	OPTEMPO Ratio (Wartime/peacetime)	Increase in Annual Depreciation (Millions of dollars)
		Aircraft		
Fighters	1,090	25	1.4–3.6	65
Tankers	500	30	1.7	10
Helicopters	2,425	20	1.6–2.3	135
Total	**4,015**	**n.a.**	**n.a.**	**210**
		Ground Equipment		
Tracked Vehicles and Other Weapons	1,075	30	8	255
Trucks	805	20	11	415
Other	555	20	4	125
Total	**2,435**	**n.a.**	**n.a.**	**795**

Source: Congressional Budget Office based on data from the Marine Corps.

Note: OPTEMPO = operating tempo; n.a. = not applicable.

worn equipment in its inventory. As with the Army, the bulk of the expense—more than three-quarters—would be for ground equipment. Because of their greatly increased OPTEMPOs, tracked vehicles and other weapons and trucks would need the biggest infusion of funds—a total of $670 million annually. Finally, on the basis of an assumed loss rate of 2 percent per year, the Marine Corps would need to spend about $130 million annually to replace equipment damaged beyond repair.

Air Force Equipment Requirements. CBO's analysis of the stress on Air Force equipment attributed to the war on terrorism differed from that of the Army and the Marine Corps in two ways. First, CBO limited its analysis to Air Force aircraft because, even though the Air Force does have some ground equipment in the Iraqi theater, aircraft make up the bulk of the service's assets. Second, because the Air Force did not provide CBO with detailed information concerning which Air Force assets have been involved in operations in Iraq and Afghanistan, or what the OPTEMPO of those assets has been, CBO conducted a fleetwide analysis to estimate the increased wear and tear on Air Force aircraft.

Table 4.

Air Force Aircraft Use in Ongoing Operations in 2005

	Inventory		Value of Equipment (Millions of dollars)	OPTEMPO Ratio (Wartime/ peacetime)	Increase in Annual Depreciation (Millions of dollars)	
	Number of Models	Number of Aircraft			Aircraft Lifetime	
					40 Years	30 Years
Transporters	5	733	99,460	1.28	750	1,000
Tankers	2	552	66,180	1.23	380	500
Bombers	2	81	43,170	1.39	290	390
Fighters	2	1,625	39,190	1.03	40	50
Gunships	1	20	3,950	1.30	30	40
Other[a]	3	54	16,160	1.16	60	80
Total	**15**	**3,063**	**268,110**	**n.a.**	**1,540**	**2,060**

Source: Congressional Budget Office based on data from the Air Force.

Note: OPTEMPO = operating tempo; n.a. = not applicable.

a. Includes three types of surveillance and reconnaissance aircraft.

CBO based its analysis on information from the Air Force Total Operating Cost (AFTOC) database, which includes information on the number of aircraft in the Air Force's inventory and the number of hours that they have flown in a given year. CBO estimated the increased depreciation for those Air Force fleets that included at least 10 aircraft and that flew at least 3 percent more hours in 2004 than they averaged annually from 1996 through 2001.[13] Fifteen types of aircraft met those criteria, including most of the Air Force's tankers and transport aircraft. (Of the Air Force's fighter air craft fleets, only two—the A-10 and the F-16—exhibited overall OPTEMPOs for 2004 that were at least 3 percent higher than peacetime.) Of the classes of aircraft that CBO examined, the Air Force's B-1 bomber fleet exhibited the highest relative increase in OPTEMPO, with a 47 percent average increase. (The combined B-1 and B-2 fleets together experienced a 39 percent increase above peacetime OPTEMPO.) Transport and tanker aircraft and the AC-130 gunship experienced large increases in OPTEMPO as well—28 percent, 23 percent, and 30 percent, respectively—with the remainder of the fleets exhibiting smaller increases (see Table 4). Because of the increase in hours flown over those typically flown in peacetime, those aircraft could depreciate faster than planned. By CBO's estimate, that accelerated depreciation

13. CBO excluded from this analysis the Air Force's training aircraft. CBO also excluded one aircraft —the WC-130 weather surveillance aircraft—that met its criteria but is designated for specific missions not related to the war on terrorism.

Table 5.

Navy Aircraft Use in Ongoing Operations in 2005

	Inventory		Value of Equipment (Millions of dollars)	Assumed Lifetime (Years)	OPTEMPO Ratio (Wartime/ peacetime)	Increase in Annual Depreciation (Millions of dollars)
	Number of Models	Number of Aircraft				
Patrol	2	262	9,070	30–40	1.15	35–45
Early Warning	1	52	4,320	30–40	1.03	5
Fighter	3	404	12,640	25	1.14	75
Helicopter	3	166	5,010	20	1.14	35
Total	**9**	**884**	**31,040**	**n.a.**	**n.a.**	**150–160**

Source: Congressional Budget Office based on data from the Navy.

Note: OPTEMPO = operating tempo; n.a. = not applicable.

could result in a total cost for the Air Force ranging from $1.5 billion to $2.1 billion for 2005 and for each year in which operations are carried out at the same rate.[14]

Navy Equipment Requirements. As with its analysis of the Air Force's equipment requirements, CBO's analysis of naval equipment requirements using the top-down approach focuses solely on aviation and is based on a fleetwide analysis.[15] Only those types of aircraft that are participating in the war on terrorism (as indicated by the Navy), have at least 10 airplanes in their inventory, and experienced OPTEMPOs exceeding their average peacetime OPTEMPO by at least 3 percent were included in CBO's analysis. Nine types of aircraft met those criteria, including three models of fighters, three types of helicopters, the E-2C early-warning aircraft, and the P-3 and S-3 patrol fleets.[16] None of the overall fleets experienced particularly high increases in OPTEMPO as a result of the war on terrorism; patrol aircraft had the largest increase—15 percent (see Table 5). Because the increases in OPTEMPO are relatively small and because the Navy's aircraft fleet is smaller than the Air Force's, the Navy's

14. The range reflects uncertainty regarding the likely lifetime of the Air Force's fleets. CBO used nominal lifetimes of 30 years and 40 years to reflect the fact that the Air Force has retained these types of aircraft for extended periods in the past.

15. Although CBO included Navy ships and submarines in its bottom-up analysis, it did not include them in its top-down analysis because their increased usage is not likely to result in the need for accelerated replacement.

16. As with the Air Force, some of the Navy's aircraft might have experienced higher OPTEMPOs because of activity associated with Operation Noble Eagle or other war on terrorism-related activities outside of Iraq or Afghanistan.

Table 6.

Estimated Total Cost to Replace and Refurbish the Services' Equipment in 2005

(Billions of dollars)

	Stress	Loss	Total
Army	4.7	0.6	5.3
Marine Corps	1.0	0.1	1.1
Air Force[a]	1.5–2.1	0	1.5–2.1
Navy	0.2	0	0.2
Total	**7.4–8.0**	**0.7**	**8.1–8.6**

Source: Congressional Budget Office.

a. Range reflects assumed lifetime of 30 years to 40 years for Air Force aircraft.

annual cost for wear and tear is the smallest among the four services. CBO estimates that cost to be approximately $150 million, with the fighter fleet accounting for roughly half of it.

Costs of Wear to Equipment in 2005 Across the Four Services. CBO estimates that the requirement in 2005 for funds to replace equipment from all four services that is worn out or is beyond repair—defined as a "loss"—would total between $8 billion and $9 billion (see Table 6). The Army would need $5.3 billion in replacement funds; the Air Force, up to $2.1 billion; the Marine Corps, $1.1 billion; and the Navy, about $0.2 billion.

Changes in Equipment Costs over Time

CBO attempted to determine whether any requirements for funds to offset equipment wear and loss have accumulated from years prior to 2005 and if so, how big the backlog might be. CBO also attempted to estimate the size of the bill for equipment stress and loss in future years.

Backlog of Unmet Requirements from Previous Years. CBO's estimate of annual funds required to replace worn-out and lost equipment discussed in the previous section was based on force levels expected for 2005 and operating tempos experienced in 2004. However, each of the services has incurred expenses related to wear on equipment and loss for the years preceding 2005 during which operations related to the war on terrorism were conducted. Large numbers of U.S. ground forces began arriving in Kuwait in preparation for invading Iraq in December 2002, and data in the Army's Operating and Support Management Information System (OSMIS) reflect increased OPTEMPOs for Army equipment in the last two quarters of 2003. CBO therefore assumed that the equipment stress projected for 2005 could also have occurred in the

second half of 2003 and throughout 2004.[17] The total accumulated cost for the years 2003, 2004, and 2005 associated with equipment stress based on CBO's estimate would equal $20 billion to $22 billion.

The services have, of course, received some funds in supplemental appropriations with which to address equipment wear and tear. But it is not easy to determine how much of the roughly $197 billion (in then-year dollars) that had been appropriated to the Department of Defense (DoD) by the end of calendar year 2004 to support the war on terrorism has been used to address that issue.[18] Since the start of operations in Iraq, more than $100 billion of the $197 billion has been allotted to operations and maintenance, and some of those funds have undoubtedly been used to repair stressed equipment, although the majority has probably been used to pay for fuel and other operating costs. Almost $13 billion (in then-year dollars) has been appropriated since OIF began to procure items to conduct the war on terrorism, and some of that funding has been devoted to purchasing replacements for lost equipment. But it is not possible to determine definitively what portion of those appropriated funds has been devoted specifically to addressing the effects of excessive wear using data available from DoD.

To get an idea of how much funding has been used for those purposes, CBO made several assumptions. First, CBO assumed that all supplemental funds allotted to depot maintenance would be devoted to overhauling equipment that had been damaged or excessively worn in operations related to the war on terrorism. Second, funds allotted to procure major pieces of equipment, such as trucks, were also assumed to offset equipment wear and loss. Finally, CBO relied on information in briefings it received from the services to try to identify supplemental funding that could be used to offset the more than $20 billion cost that might accrue through 2005. All told, CBO identified a total of more than $3 billion that may have been appropriated—primarily in 2004—for overhauling and replacing stressed and lost equipment. Of that total, the bulk—$1.6 billion—was provided to the Army (see Table 7). Based on those assumptions, an estimated total backlog of roughly $18 billion in costs related to equipment wear and loss may accumulate by the end of 2005 if the services receive no additional funding.[19]

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17. The level of ground forces in and around the Iraqi theater has remained relatively constant since the middle of 2003.

18. Press reports indicate that the Army plans to hire an independent auditing firm to help it determine how it spent its supplemental budgets. It has decided to do so, according to its solicitation, in part because the "challenges in providing a clean accounting of [war on terrorism] costs include . . . costs associated with the maintenance and repair of military equipment in support of" the war on terrorism. See "Army Wants Outside Audit of Terrorism War Spending" (Defense Alert, February 9, 2005), available at http://insidedefense.com/.

19. That estimate does not take into account funds requested for equipment stress in the 2005 supplemental funding request submitted in February 2005.

Table 7.

Costs and Funds Appropriated for Equipment Stress and Loss, 2003 to 2005

(Billions of dollars)

	Costs Accrued (2003-2005)	Appropriated[a] (2003 and 2004)	Total Unpaid Costs Accrued Through 2005
Army	13.2	1.6	11.6
Marine Corps	2.8	0.1	2.7
Air Force[b]	3.9–5.2	0.7	3.2–4.5
Navy	0.4	0.8	0.2[c]
Total	**20.3–21.6**	**3.2**	**17.7–18.9**

Source: Congressional Budget Office.

a. Does not include funds requested for equipment stress in the 2005 supplemental request submitted in February 2005.

b. Range reflects assumed lifetime of 30 years to 40 years for Air Force aircraft.

c. Costs for 2005.

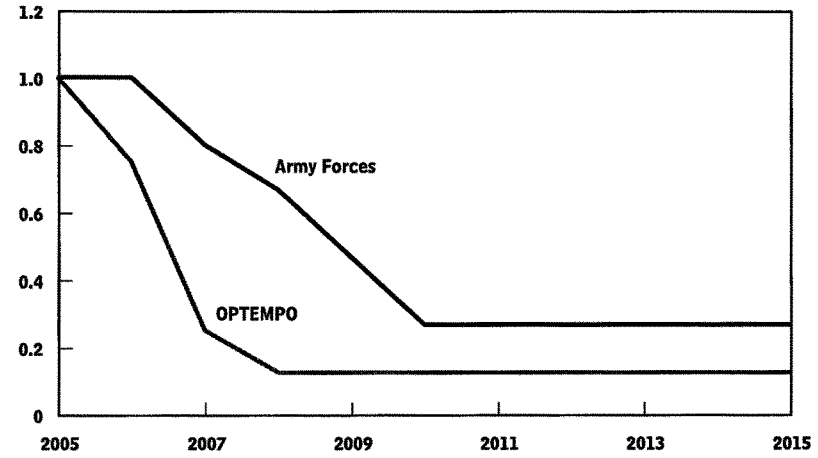
Future Requirements Related to Equipment Stress and Loss. CBO assumed that the security situation in Iraq will improve over the next several years and, as a result, both the level of U.S. forces and the pace of operations will diminish. Because there is no official timetable for either a drawdown of forces or an easing of the pace, CBO assumed a gradual reduction of both until a steady state is achieved in 2010 (see Figure 2).[20] The end state achieved in 2010 is consistent with maintaining a total of four Army brigades in the Iraqi and Afghani theaters—or otherwise involved in operations associated with the war on terrorism—and an activity level that would be only slightly higher than that experienced in peacetime. (CBO assumed that all other forces in-theater—specifically Army units outside of the divisions and units from the Marine Corps—would draw down proportionately with the Army divisions.)

The combination of reduced force levels and a decreased OPTEMPO would result in significantly fewer pieces of equipment that would need replacing or refurbishing. As a result, the annual cost related to equipment stress and loss would drop from between $8 billion and $9 billion in 2005 to roughly $800 million by 2010. If the backlog of unmet requirements from 2003 and 2004 is included in the funding required for 2005, and if the backlog is indeed eliminated, then the annual funding needed drops

20. Those force levels are consistent with the ones used to determine potential future spending for activities in Iraq, Afghanistan, and the war on terrorism in CBO's *Budget and Economic Outlook: Fiscal Years 2006 to 2015* (January 2005).

Figure 2.

Assumed Reductions in Forces and Operating Tempo from the 2005 Level



Source: Congressional Budget Office.

Notes: Forces in a given year = (Forces Scaling Factor for that year) x (level of forces in 2005).

The ratio of wartime OPTEMPO to peacetime OPTEMPO in a given year = 1 + (OPTEMPO Scaling Factor for that year) x [(wartime OPTEMPO in 2005/peacetime OPTEMPO in 2005) − 1].

dramatically from between $18 billion and $19 billion in 2005 to roughly $800 million in the out-years (see Figure 3).

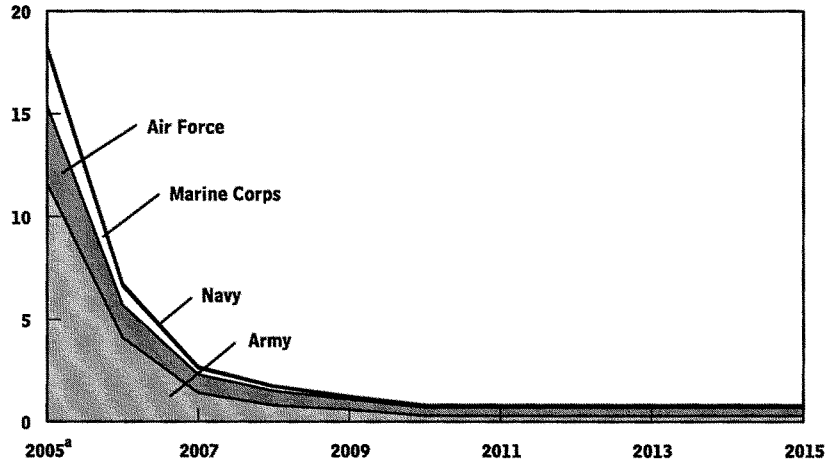
A Bottom-Up Approach to Estimating the Cost of Wear on Equipment

An alternative to the top-down depreciation method for estimating the costs of wear on equipment is to calculate from the "bottom up" the costs for all maintenance activities that must be performed on military equipment being used in the war on terrorism, as well as the costs to replace equipment destroyed or worn beyond repair. In the bottom-up approach, CBO defines five categories of maintenance and replacement activities: sustain, restore to standard in-theater, restore to standard at depot, recapitalize, and replace (see Box 1 on page 20 and Figure 4 on page 21). The unit of analysis is an individual system class or model, such as the M1A1 Abrams tank or the C-5 transport aircraft. The total costs of wear on equipment attributable to operations related to the war on terrorism are those to perform all maintenance activities on each piece of equipment being used and to replace equipment as needed.

Figure 3.

Annual Funds Needed to Replace Equipment Lost Because of Stress and Damage in Contingency Operations, Based on CBO's Top-Down Approach

(Billions of dollars)



Source: Congressional Budget Office.

a. Includes backlog of unfunded requirements from 2003 and 2004.

The data available determined the methods CBO used to estimate maintenance-activity costs arising from those operations—that is, the costs over and above those associated with peacetime usage of equipment:

- For all the services' equipment, historical data were available to derive the marginal or average costs for sustaining equipment per mile driven, hour flown, or day steaming.[21]
- In some cases, analysis of historical data permitted the derivation of either the marginal costs or average costs for all maintenance activities collectively (including sustainment) per mile, hour, or day (see Figure 5 on page 22).

21. Wheeled- and tracked-vehicle use is generally measured in terms of miles. Ship use is measured in terms of days. Most other equipment use is measured in terms of hours. CBO refers to miles, hours, and days interchangeably in this analysis.

When regression analysis yielded a positive and statistically significant relationship between costs and equipment use, CBO used the slope of that relationship as the marginal cost of hours in excess of peacetime. If regression analysis proved unstable, CBO instead used the simple ratio of average maintenance spending to average hours.

Box 1.

Maintenance and Replacement Activities

The Congressional Budget Office (CBO) divided costs for wear on equipment into five categories that represent a classification of all possible maintenance and replacement actions (see Figure 4). That categorization is similar to the breakdown of equipment-stress estimates that the Office of the Secretary of Defense directed the services to use in the preparation of their background material for justifying the supplemental budget request for 2005. Activities at the base of the pyramid are less costly, but performed more frequently, than activities at the apex. The typical location where each activity is performed is indicated in parentheses.

"Sustainment" involves routine maintenance tasks such as inspection, lubrication, and replacement of minor parts. All systems require sustainment activity. If equipment is not regularly maintained, it may require more-serious repair or fail prematurely in the future. Sustainment occurs continually at the unit level, in garrison during peacetime, or in-theater during contingency operations. This category does not include operational costs, such as fuel, that are not related to equipment maintenance.

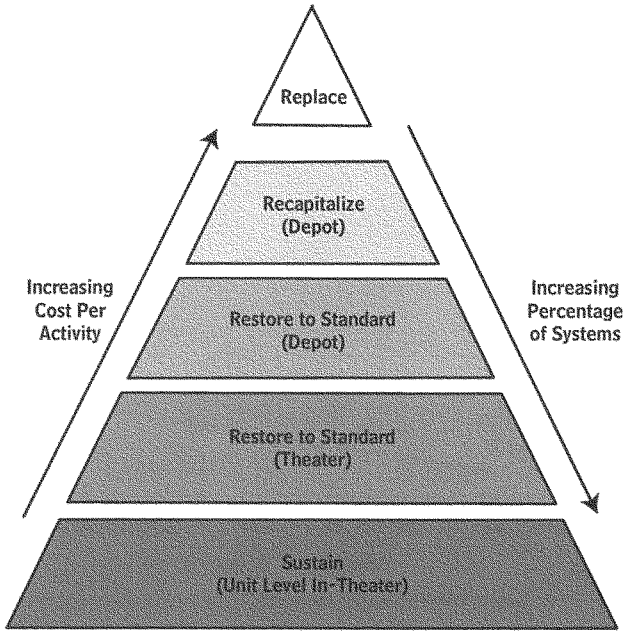
"Restoring to standard" involves repairing equipment so that it meets established capability requirements. The Army, for example, repairs a system so it meets standards set in the Army's series 10 and 20 technical manuals. Restoring to standard is more complex and costly than sustainment and is performed as needed rather than on a continual basis. Depending on the level of repair required, restoring to standard may be performed in theater installations or at an organic or contractor depot facility in the United States. Work conducted at the depot is more exhaustive and expensive.

"Recapitalization" involves rebuilding and upgrading a system's components. A significant investment of labor and money, recapitalization returns systems to almost new (zero-mile or zero-hour) condition. Recapitalization can also reduce a system's subsequent operating and support costs and enhance its capability through component upgrades. Not all systems are candidates for recapitalization; appropriate programs and facilities must be in place.

"Replacement" indicates that the system has been damaged beyond the point at which it is cost-effective to repair. Irreparable equipment damage may be the result of combat or heavy wear. CBO assumes that those systems are replaced with newly procured systems, if available, or systems pulled from surplus. In some cases, replacement cannot occur because a comparable replacement does not exist or the system is scheduled to be phased out of the force structure.

Figure 4.

Maintenance and Replacement Activities



Source: Congressional Budget Office.

- For some equipment, historical data on maintenance costs were either unavailable or incomplete. In such cases, CBO prepared its estimates using either historical data for costs to maintain analogous equipment or data provided by the services for expected maintenance and replacement costs.

For a summary of the methods CBO used to estimate costs attributable to worn equipment for each of the services' major types of equipment, see Table 8 on page 23.

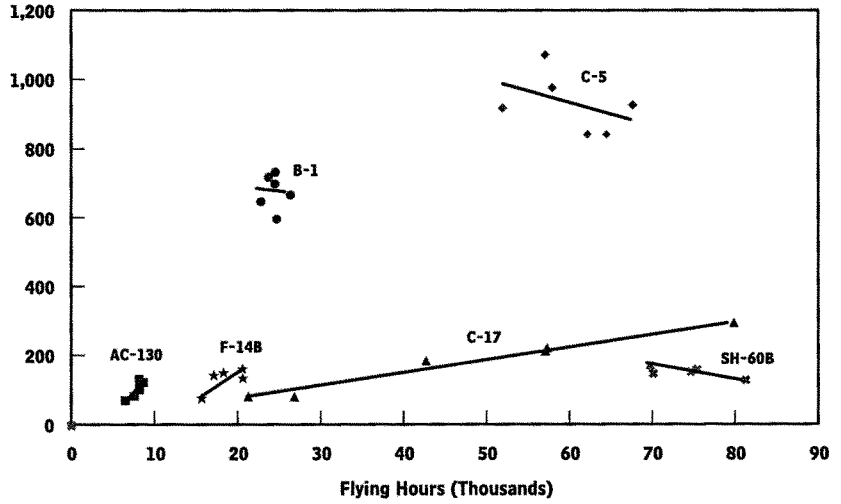
Army Requirements

The Army, by virtue of fielding the most equipment in-theater, requires the highest additional maintenance and replacement spending among the services. Because the Army fields hundreds of different systems, CBO selected a subset comprising the major Army equipment being used in Iraq and Afghanistan. These systems match those considered in the top-down depreciation calculations and constitute most of the total dollar value of Army equipment. The Army did not provide CBO with an estimate of the quantity of each system in-theater. CBO instead generated its own estimate of

Figure 5.

Examples of Peacetime Relationship Between Annual Flying Hours and Total Maintenance Spending

(Millions of dollars)



Source: Congressional Budget Office based on data from the Air Force Total Ownership Cost database and the Navy's Visibility and Management of Operating and Support Costs database.

equipment quantities based on the number and types of Army units deployed in-theater.

CBO examined historical data for the years 1993 through 2003 contained in the Army's Operating and Support Management Information System. To estimate sustainment costs, CBO relied on past consumable and reparable spending records, as well as equipment usage data, contained in OSMIS. By performing a regression analysis, CBO calculated system-specific sustainment costs per additional mile or hour. When a statistically significant relationship between cost and use was not found, CBO instead calculated an average cost per mile. On the basis of wartime OPTEMPO data provided by the Army, CBO then estimated the additional miles or hours of use attributable to operations in Iraq and Afghanistan for each system. Sustainment costs attributable to operations equal the additional miles operated multiplied by the marginal or average cost per mile. Because the Army provided CBO with only rough estimates of wartime OPTEMPOs, CBO used ranges based on the type of equipment, such as aircraft or wheeled vehicle. Those ranges, in turn, generated ranges of sustainment costs.

Table 8.

The Basis for Estimating Costs for Each Activity Using the "Bottom-Up" Approach

Equipment Type	Sustainment	Restoring to Standard		Recapitalization	Replacement
		In-Theater	At Depot		
			Army		
Aircraft	Marginal cost per hour	Service-provided data	Service-provided data	n.a.	Procurement cost
Ground	Marginal cost per mile	Service-provided data	Service-provided data	Service-provided data	Procurement cost
			Marine Corps		
Aircraft	Marginal cost per hour	Marginal cost per hour	Marginal cost per hour	n.a.	Procurement cost
Ground	Marginal cost per mile	Service-provided data	Service-provided data	n.a.	Procurement cost
			Air Force[a]		
Aircraft	Marginal cost per hour	Marginal cost per hour	Marginal cost per hour	n.a.	n.a.
			Navy[a]		
Aircraft	Marginal cost per hour	Marginal cost per hour	Marginal cost per hour	n.a.	n.a.
Ships	Marginal cost per day	Marginal cost per day	Marginal cost per day	n.a.	n.a.

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. Ground equipment were not analyzed.

For maintenance activities above sustainment, as well as replacement, CBO concluded that the OSMIS data did not consistently capture all the costs necessary for the estimate of wear on equipment. Thus, CBO used maintenance activity and replacement needs, and the associated costs, provided by the Army. Those estimates were based largely on Army briefings and data containing replacement, recapitalization, and restoration (in-theater and depot) rates and costs.[22] If data were not available for a system, CBO assumed rates and costs approximately equal to those of similar pieces of equipment. To accommodate uncertainty in those rates, CBO again used ranges rather than point estimates.

22. Those data comprise estimates of the percentage of each system's inventory in Iraq and Afghanistan requiring in-theater restoration, depot restoration, recapitalization, and replacement at rates exceeding peacetime levels.

Table 9.

Army Maintenance and Replacement Costs Resulting from Operations in 2005

(Millions of dollars)

Equipment Type	Total Increased Costs
Aircraft	1,090–1,580
Tracked Vehicles	1,080–1,500
Wheeled Vehicles	1,510–2,260
Total	**3,680–5,340**

Source: Congressional Budget Office based on Army briefings and data from the Army's Operating and Support Management Information System.

On the basis of those bottom-up estimates, the Army needs between $3.7 billion and $5.3 billion annually to pay for maintenance-activity and replacement requirements attributable to operations in Iraq and Afghanistan (see Table 9). Wheeled vehicles constitute the largest portion of that requirement because of their high wartime-to-peacetime OPTEMPO ratios and large numbers in-theater. Because of data constraints, CBO's analysis did not consider minor equipment, such as electronics and firearms, that could add to the estimate of wear on equipment. However, CBO believes that the maintenance costs of those less expensive systems are much smaller than for aircraft, tracked vehicles, or wheeled vehicles.

Marine Corps Requirements

The Marine Corps also has a substantial amount of equipment—and resulting maintenance-activity costs—in Iraq and Afghanistan, although not nearly as much as the Army. CBO's source of historical maintenance expenditures and equipment usage, the Visibility and Management of Operating and Support Costs (VAMOSC) database, contained detailed enough data to calculate total maintenance costs per hour for Marine Corps aircraft but not ground equipment.[23] Consequently, CBO analyzed ground equipment using the same technique as it used for Army equipment.

The Marine Corps provided equipment quantities and wartime-to-peacetime OPTEMPO ratios for most major ground equipment in-theater. System sustainment costs per mile were calculated on the basis of a regression analysis of historical consumable and reparable costs and equipment usage. If data were not available, CBO assumed sustainment costs per additional mile were approximately equal to those of analogous Army ground equipment.

23. VAMOSC contains both Marine Corps and Navy data.

For restoration, recapitalization, and replacement activities, CBO calculated system-specific costs by multiplying the expected number of items requiring each activity by the cost to perform each type of activity. CBO used estimates of activity rates and costs presented in a Marine Corps briefing and cross-checked those data with Army data for similar systems. According to the Marine Corps, it does not have any requirements to recapitalize or restore ground equipment to standard in-theater. The Marine Corps currently performs all maintenance activities above sustainment in the continental United States.

For Marine Corps aircraft, historical aircraft maintenance cost data and flying-hour numbers from the VAMOSC database allowed CBO to calculate a full maintenance cost per additional flying hour.[24] That cost includes all maintenance activities (including sustainment) except recapitalization—for which the Marine Corps has no requirements.

The Marine Corps provided CBO with aircraft quantities and wartime-to-peacetime OPTEMPO ratios for operations in Iraq and Afghanistan. However, the OPTEMPO ratios were not based on a full year's worth of data, so CBO employed ranges in its estimate. Using those ranges in conjunction with historical VAMOSC data on peacetime flying hours (for the period spanning 1997 to 2001), CBO calculated the additional flying hours resulting from contingency operations. For each aircraft model, the cost of wear on equipment was determined by multiplying flying hours attributable to operations in Iraq and Afghanistan by the additional maintenance costs per hour. The Marine Corps also provided data on the number and type of aircraft lost or damaged beyond repair since the war on terrorism began, which CBO used to estimate an annual percentage of aircraft lost.

On the basis of those bottom-up estimates, the Marine Corps needs between $800 million and $1.3 billion annually to pay for maintenance-activity and replacement requirements attributable to Iraq and Afghanistan (see Table 10). Aircraft and wheeled vehicles constitute the largest portions of that requirement.

Air Force Requirements

CBO's analysis of the Air Force's wear on equipment focused on aircraft. The Air Force does have ground equipment participating in the war on terrorism, but the estimated value of that equipment, about $1.7 billion, is only a fraction of that for aircraft.

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24. For the purpose of that estimate, CBO defined maintenance costs as all aircraft maintenance-related expenses that vary with the number of hours flown. Those costs include such items as reparables, consumables, aircraft and engine rework at the depot, civilian and contractor personnel costs, and engineering services. CBO did not include military personnel costs, since they are generally fixed and independent of the number of hours flown.

Table 10.

Marine Corps Maintenance and Replacement Costs Resulting from Operations in 2005

(Millions of dollars)

Equipment Type	Total
Aircraft	310–400
Tracked Vehicles	140–240
Wheeled Vehicles	300–480
Other	90–160
Total	**840–1,280**

Source: Congressional Budget Office based on Marine Corps briefings and the Visibility and Management of Operating and Support Costs database.

CBO was able to estimate the total maintenance cost per additional Air Force aircraft flying hour on the basis of historical data, as it did in the Marine Corps aircraft analysis. The Air Force did not provide OPTEMPOs, so CBO calculated aircraft-model OPTEMPO ranges using data from the Air Force Total Ownership Cost database. (AFTOC contained data up through the entire fiscal year 2004.) In addition, because the Air Force did not provide estimates of the number of aircraft involved in Iraq and Afghanistan, CBO had to perform a fleetwide analysis rather than focus only on aircraft in-theater.[25]

CBO analyzed only aircraft models that are flying at least 3 percent more hours annually than in peacetime and whose fleets are composed of at least 10 aircraft.[26] On the basis of CBO's calculations, the Air Force needs between $1.2 billion and $1.8 billion annually to pay for maintenance-activity and replacement requirements attributable to operations associated with the war on terrorism (see Table 11). The tanker and transport fleets are experiencing the largest total increase in flying hours because of contingency operations and as a result constitute about three-quarters of the estimate for wear on equipment. According to the Air Force, it does not need to replace any of its aircraft as a result of contingency operations.

25. Although OPTEMPO increases are lower in a fleetwide analysis (because they are calculated across the entire fleet rather than only for aircraft involved in operations stemming from the war on terrorism), they are applied to a larger population of aircraft. Therefore, assuming the data are accurate, a fleetwide analysis and an analysis of only contingency-operation aircraft should produce the same result.

26. CBO did not include the WC-130 hurricane reconnaissance aircraft in its analysis, although that aircraft did meet the selection criteria.

Table 11.

Air Force Maintenance and Replacement Costs Resulting from Operations in 2005

(Millions of dollars)

Aircraft Type	All Maintenance
Bombers	130–300
Fighters	80–120
Reconnaissance and Special Duty	80–100
Transports and Tankers	940–1,250
Total	**1,230-1,770**

Source: Congressional Budget Office based on Air Force briefings and the Air Force Total Ownership Cost database.

Navy Requirements

CBO's analysis of Navy systems included aircraft and ships but not ground equipment, which represents only a small portion of the value of all Navy equipment participating in-theater. For aircraft, CBO again used historical data to estimate maintenance costs per additional flying hour. CBO considered only aircraft that are participating in the war on terrorism (as indicated by the Navy), that are flying at least 3 percent more hours annually than in peacetime and whose fleets are composed of at least 10 aircraft. The historical flying-hour and cost data contained in VAMOSC spanned 1997 through 2003. The Navy did provide more recent flying-hour data, but it included aircraft operated by the Marine Corps, which CBO analyzed separately. The Navy currently does not need to recapitalize or replace any aircraft.

For ships and submarines, CBO assumed that the Navy would continue to maintain a Carrier Strike Group (CSG) and an Expeditionary Strike Group (ESG) in-theater. The specific CSG and ESG participating in contingency operations change as groups rotate into and out of theater, so CBO generated its estimate on the basis of a generic CSG and ESG comprising a total of 13 ships. Using historical data from VAMOSC, CBO was able to calculate an average total maintenance cost per steaming day for each ship class.[27] According to the Navy, ships in the Iraqi and Afghani theaters are generally steaming 20 days more per quarter than in peacetime (an annual difference of 80 days per ship). To estimate the maintenance costs attributable to that increased

27. CBO did not perform a regression analysis of historical ship-use and maintenance-cost data, since annual steaming hours per ship class are approximately constant in peacetime. CBO believes that the average cost per steaming day is probably an overestimate of the actual ship-maintenance cost per additional steaming day. Ship maintenance, particularly for activities above sustainment, is usually dictated by the age of a ship, rather than the number of days it was steaming. Consequently, some ship-maintenance costs are fixed and do not vary with ship usage.

Table 12.

Navy Maintenance and Replacement Costs Resulting from Operations in 2005

(Millions of dollars)

Equipment Type	Total
Aircraft	100–180
Ships and Submarines	150–170
Total	**250–350**

Source: Congressional Budget Office based on Navy briefings and the Visibility and Management of Operating and Support Costs database.

operation, CBO multiplied the cost per steaming day by the number of additional steaming days. The Navy does not have any ship replacement requirements resulting from operations in-theater.

On the basis of those estimates, the Navy needs approximately $250 million to $350 million to pay for maintenance-activity and replacement requirements attributable to operations stemming from the war on terrorism, about half of which is for ships (see Table 12). Because of a lack of data, CBO did not consider the Military Sealift Command in its analysis.

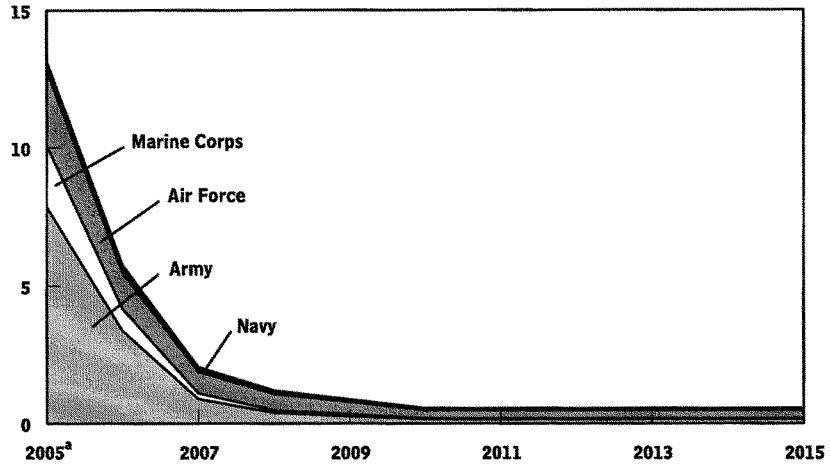
Accumulated and Future Requirements Related to Equipment Stress and Loss

CBO used the bottom-up approach to estimate the costs of wear on equipment for years prior to 2005, and for future years, consistent with the assumptions described previously regarding the force levels and pace of operations in Iraq and Afghanistan. Based on the bottom-up estimates, the total cost associated with equipment stress for the years 2003, 2004, and 2005 is approximately $18 billion. The services have already received some funds in supplemental appropriations to pay for the maintenance activities that are addressed in the bottom-up approach, although the exact amount is unclear. CBO estimates that supplemental appropriations enacted in 2002, 2003, and 2004 provided about $5 billion to $6 billion for equipment maintenance and replacement resulting from the war on terrorism. That estimate includes the cost of all maintenance activities except sustainment, which CBO believes is paid for out of the general operation and maintenance funds included in the supplemental appropriations. On the basis of those estimates, a total backlog of $13 billion for wear on equipment will have accumulated by the end of 2005. After 2005, the annual cost related to wear on equipment will gradually decrease from $5.8 billion in 2006 to a steady-state value of less than $600 million in 2010 and beyond, based on CBO's assumptions (see Figure 6).

Figure 6.

Annual Funds Needed to Maintain and Replace Equipment Used in Contingency Operations, Based on CBO's Bottom-Up Analysis

(Billions of dollars)



Source: Congressional Budget Office.

a. Includes backlog of unfunded requirements from 2003 and 2004.

Service Estimates of Funding Required to Address Equipment Stress

In response to direction from the Secretary of Defense, the services estimated the resources they would need to address the effects of increased use of their equipment to conduct the war on terrorism. As directed, each of the services determined the resources they needed to repair and replace stressed equipment as well as to make necessary improvements (such as providing aircraft with equipment to counter surface-to-air missiles and trucks with additional armor). Further, they identified the investments needed to increase their repair and maintenance capability in the Iraqi and Afghani theaters. The services provided CBO with the results of their equipment-stress analyses (see Table 13). As with CBO's analysis, the Army's requirements are significantly larger than those of the other services.

Table 13.

Service Estimates of Unpaid Costs Accrued Through 2005 to Replace and Refurbish Equipment Used in the War on Terrorism Since 2003

(Billions of dollars)

	Repair	Replace	Improve Equipment	Increase In-Theater Repair and Maintenance Capabilities[a]	Total
Army	7.0	0.7	0	1.6	9.2
Marine Corps	0.4	0.3	0.3	0.7	1.7
Air Force	0.4	0.1	0.5	0	0.9
Navy	0.6	0.2	0.1	b	1.0
Navy aviation	0.1	0.2	0.1	b	0.4
Total	**8.4**	**1.3**	**0.9**	**2.3**	**12.8**

Source: Congressional Budget Office based on briefings from the services.

a. Referred to as "sustainment" in service briefings.

b. Less than $50 million.

DoD's 2005 supplemental funding request for Operation Iraqi Freedom and Operation Enduring Freedom included funds to cover most of the services' requirements.[28] The supplemental funding request seeks approximately $12 billion to "recapitalize equipment, conduct depot maintenance, and procure new and replacement equipment," according to the "Overview of Requirements" submitted with the request.[29] That number corresponds with the total amount—$12.8 billion—that CBO compiled from service estimates of their unpaid costs through 2005 that are summarized in Table 13. According to information provided by the services in briefings, $900 million of the $12 billion included in the supplemental funding request would go to the Air Force to meet its requirements. Based on the Army's briefing, roughly $6.5 billion—$3.4 billion for depot and other maintenance and $3.1 billion to recapitalize and replace equipment—is included in the supplemental request to meet its equipment needs. That would leave approximately $4.6 billion out of the $12 billion that is included in the supplemental request to address equipment needs but that CBO

28. DoD's request also included funds for Operation United Assistance, which provided relief to the victims of the tsunami in Southeast Asia.

29. In contrast, DoD's talking points state that the supplemental funding request included only $8.7 billion for "depot maintenance and to replace worn-out/damaged equipment."

Table 14.

CBO's Estimates of Costs for 2005 and Total Unpaid Costs Accrued Through 2005 Related to Equipment Stress and Loss

(Billions of dollars)

	Top-Down Depreciation Method		Bottom-Up Maintenance-Activity Method[a]	
	2005 Only	Accrued Through 2005	2005 Only	Accrued Through 2005
Army	5.3	11.6	4.5	7.9
Marine Corps	1.1	2.7	1.1	2.2
Air Force	1.8[b]	3.9[b]	1.5	2.8
Navy	n.a.	n.a.	0.3	0.3
Navy aviation	0.2	0.2	0.1	0.1
Total	**8.4**	**18.4**	**7.4**	**13.2**

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. Based on midpoint of range of estimates.

b. Average of estimates based on aircraft lifetime of 30 years to 40 years.

could not attribute to a specific service or activity. Those funds would be sufficient, however, to cover most of the remaining unpaid costs attributable to the Army, Navy, and Marine Corps that CBO identified on the basis of the services' estimates.

Comparison of CBO's Estimates and Those of the Services

Although CBO used two very different methods to determine the costs associated with equipment stress, the resulting estimates are generally similar. And where CBO's estimates do vary from those derived by the services, they share some common features.

How CBO's Estimates Differ from Each Other

CBO used two approaches to estimate the costs related to equipment stress to provide the broadest possible insight into and perspective on those potential costs. The two methods, one taking an aggregate top-down approach and the other a more detailed bottom-up approach examining the effect on many individual systems, yielded roughly comparable results (see Table 14). Those results held true even though the approaches differed widely in the assumptions and methods used (see Table 15). In the top-down or depreciation approach, increased usage is assumed to shorten the useful lifetime of particular classes of equipment; maintenance costs are ignored or assumed

Table 15.

Comparison of CBO's Approaches to Estimating Costs Associated with Equipment Stress

	Depreciation	Maintenance Activity
Unit of Analysis for Army Equipment	Class of equipment (such as Army trucks)	Individual equipment type or model (such as M1A1 tank)
Equipment Lifetime	Assumed to be reduced because of increased usage	Assumed to not be affected by usage
Maintenance Costs	Ignored or assumed to be implicit in increased depreciation	Increased costs because of higher operating tempo estimated explicitly for five types of activity for each type of equipment
Total Annual Cost	Sum of increased depreciation for all classes of equipment	Sum of cost increases for five types of maintenance and replacement activities

Source: Congressional Budget Office.

to be implicitly included in the increased depreciation cost; entire classes of Army equipment—such as trucks or helicopters—are treated as one entity; and the total cost to each service is the sum of the costs of increased depreciation of each class of equipment. The estimates that result from that method exclude the costs of day-to-day maintenance activities, referred to as sustainment, and other relatively routine maintenance activities.[30] Rather, CBO's estimates based on that method correspond most closely to costs associated with activities that are relatively infrequent and more costly than day-to-day or scheduled maintenance activities, such as major overhauls, recapitalization, or replacement.

In contrast, the bottom-up or maintenance-activity approach was based on a detailed analysis of four types of maintenance activity plus replacement. In that method, each type or model of equipment—such as the M1A1 tank—was analyzed individually, and the lifetime of those pieces of equipment was not affected by increased usage. The increased costs of each of the four maintenance activities and replacement were calculated separately for each type of equipment, and the total cost to each service was the increase in the costs for maintenance activities and replacement needed for those pieces of equipment whose usage increased appreciably over that in peacetime because of the war on terrorism. Because the bottom-up method included costs of routine maintenance, it is more comprehensive in its scope of types of costs examined than the first method. (Routine maintenance costs were not addressed in the top-down approach.) However, because the more detailed bottom-up approach was limited in the number of systems that it could examine because of data and time constraints, it may

30. CBO's top-down approach also excluded costs associated with wear and tear on Navy ships and submarines that were included in the bottom-up approach.

exclude the costs incurred by some systems that are being used at high rates in the war on terrorism and that were included in the more aggregate top-down approach. Thus, because each of the two methods includes costs that are not contained in the other method, there are some differences between the two that cannot be totally reconciled. But they do provide different perspectives on and illuminate different aspects of the costs of increased equipment use by the military in the war on terrorism.

How CBO's Estimates Differ from Those of the Services

In addition to differing from each other, CBO's two estimates also differ from those of the services. Neither of CBO's estimates includes the following costs because they are not a direct consequence of increased equipment usage:

- The cost of improving equipment that is currently used in the war on terrorism (for example, aircraft survivability equipment or armor for trucks);
- The cost of reorganizing the Army's force structure, often referred to as "modularity";
- The cost of establishing repair and maintenance facilities, and improving those that exist, in the Iraqi and Afghani theaters (referred to as improving "sustainment capability" in service estimates);
- The cost to replace many small items such as tents, pallets, and expended munitions such as Hellfire missiles; and
- The cost to upgrade or modernize systems when they are replaced (for example, replacing an A2 version of the Bradley fighting vehicle with an A3 version).

CBO also was unable to include the effect of the harsh desert and operating conditions on equipment in the Iraqi or Afghani theaters in either of its estimates because those effects have not been quantified. Finally, CBO did not include the costs associated with Air Force and Navy ground equipment because those costs are small relative to other categories of cost included in CBO's estimates.

Although both of CBO's estimates differ from the services' estimates by excluding those costs, each differs from the services' estimates in unique ways.

Differences Between CBO's Top-Down Estimate and Those of the Services. CBO's top-down estimate, which is based on the increased rate at which the services would need to replace all of their equipment used in the war on terrorism because of increased wear and depreciation, could result in an overestimate compared with the services' estimate for two reasons. First, with respect to the Army, the top-down approach aggregated equipment used in the war on terrorism into very broad categories and assumed that all equipment in-theater experienced elevated usage rates compared with peacetime. It also assumed that all equipment in a given class experienced the

same elevated usage rate. That may be an overstatement of the Army's equipment-related costs because certain types of equipment may not be experiencing conditions that would necessitate their replacement. Second, because CBO assumed that a piece of equipment reaching the end of its useful lifetime would be replaced immediately, the resulting cost estimate represents an upper limit on the replacement costs for a given year. In other words, equipment reaching the end of its useful life would not necessarily need to be retired and replaced immediately—as CBO assumed—particularly if the services have additional equipment, such as that assigned to units not engaged in the war on terrorism, that could be used in-theater.

Conversely, some of CBO's assumptions made as part of the top-down approach may result in an estimate that would be lower than that of the services. As mentioned previously, CBO did not take into account any increased wear and tear—above that attributable to higher OPTEMPO—that would result from harsh desert conditions or greater-than-peacetime loads that equipment might be experiencing in Iraq and Afghanistan. In addition, CBO did not take into account differences in cost that would result because some types of equipment are no longer being manufactured and therefore cannot be replaced by brand-new copies of exactly the same equipment. (The Army's OH-58D helicopter and 939 series of medium trucks are examples of pieces of equipment that are being used heavily in the Iraqi theater but are no longer being bought by the Army or produced.) In such instances, if the worn-out pieces of equipment were to be replaced, the services would have to replace them with equipment available from an existing production line. In some cases in which CBO's estimate includes funds to replace various types of equipment, the services would have to buy a more modern—and generally more expensive—version. And in other cases, such as Army reconnaissance helicopters and Air Force tankers, the service will not replace worn or damaged equipment until production of its next-generation systems begins.[31]

Differences Between CBO's Bottom-Up Estimate and Those of the Services. CBO's estimates derived from the bottom-up approach also differed in several ways from the services' estimates of costs related to equipment stress. First, CBO's estimates include sustainment costs associated with higher operating tempos; those costs might be defined as operating costs in the services' estimates rather than as costs associated with equipment stress. Second, as with its top-down estimate, CBO's bottom-up estimate did not take into account additional stress and related costs that might result from equipment operating in the harsh environments of Iraq and Afghanistan. Anecdotes suggest that dusty, sandy, and hot surroundings wear down equipment at a higher rate than a more temperate operating environment. Third, CBO assumed that the services' ability to maintain and replace equipment was unconstrained. In other words,

31. Excluding the costs to replace Army OH-58D reconnaissance helicopters would decrease the Army's estimated requirement by roughly $55 million in 2005. Forgoing replacement of Air Force tankers would lower the 2005 estimate by $380 million to $500 million.

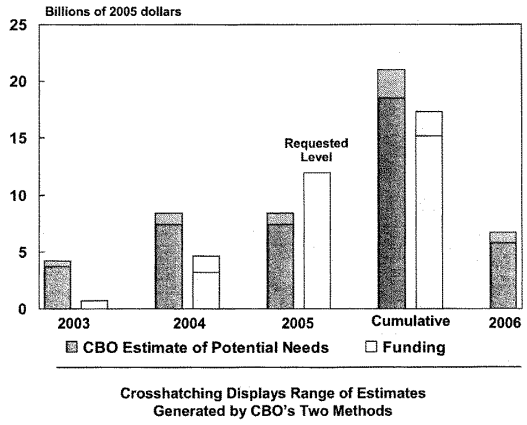
CBO did not consider manpower limitations or maintenance-facility capacities in its estimates.

The bottom-up approach relies on the premise that increased equipment use generates an increased need for maintenance, repair, and replacement. CBO assumed that, for each system, the costs of maintenance and repair activities increase with equipment use at a constant rate. However, if those costs do not grow in strict proportion to equipment use, then actual costs may differ from CBO's estimates.

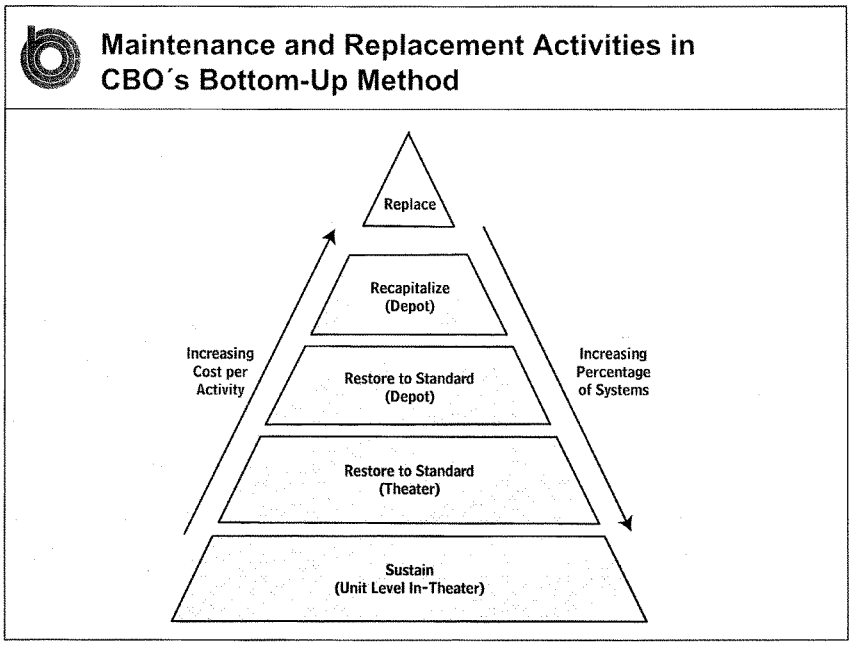
DOCUMENTS SUBMITTED FOR THE RECORD

APRIL 6, 2005

CBO Estimates of Potential Needs Compared with Funding



Crosshatching Displays Range of Estimates Generated by CBO's Two Methods


Maintenance and Replacement Activities in CBO´s Bottom-Up Method
Replace
Recapitalize (Depot)
Restore to Standard (Depot)
Restore to Standard (Theater)
Sustain (Unit Level In-Theater)
Increasing Cost per Activity
Increasing Percentage of Systems

CBO and Service Estimates of Costs Related to Equipment Stress and Loss

Billions of 2005 dollars

	CBO "Top-Down" Method		CBO "Bottom-Up" Method		
	2005 Only	Unpaid Costs Accrued Through 2005	2005 Only	Unpaid Costs Accrued Through 2005	Service Estimate of Unpaid Accrued Costs
Army	5.3	11.6	4.5	7.9	9.2
Marine Corps	1.1	2.7	1.1	2.2	1.7
Air Force	1.8	3.9	1.5	2.8	0.9
Navy	n.a.	n.a.	0.3	0.3	1.0
Navy aviation	0.2	0.2	0.1	0.1	0.4
Total	**8.4**	**18.4**	**7.4**	**13.2**	**12.8**

QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

APRIL 6, 2005

QUESTIONS SUBMITTED BY MR. HEFLEY

Mr. HEFLEY. General Huly, of the various variables impacting the ability of your service to accomplish its reset requirements, which is the most difficult to manage or attain?

General HULY. The most difficult variable impacting the Marine Corps' ability to accomplish resetting is maintaining an adequate inventory of equipment. This is because the Marine Corps must maintain sufficient assets in the Area of Responsibility (AOR) to fight the war while continuing to train for future deployments and maintain sufficient prepositioned assets to be ready to engage in future operations.

The Marine Corps has had to take equipment from home stations, training schoolhouses, our Maritime Prepositioned Squadrons and Global Preposition Program (Norway) in order to supply deploying units. All of the equipment deployed in the AOR is undergoing use at a rate five to eight times greater than average peacetime utilization in a challenging environment. This has accelerated aging of those assets and our need to procure replacements equipment at a far faster rate just to stay even.

We have employed cross-leveling of equipment across the Marine Corps to mitigate the effects of heavy equipment use/loss in the Global War on Terror (GWOT). Cross-leveling alone will not be sufficient to meet GWOT operational needs and maintain essential readiness over time.

Mr. HEFLEY. Of the various variables impacting the ability of your service to accomplish its reset requirements, which is the most difficult to manage or attain?

Admiral HUGEL. The most challenging variables are the safety of our personnel in Iraq and Afghanistan, and transit time to rotate equipment to and from CONUS.

Mr. HEFLEY. Of the various variables impacting the ability of your service to accomplish its reset requirements, which is the most difficult to manage or attain?

General WETEKAM. The Air Force faces a number of significant reconstitution challenges. The most difficult challenge facing the Air Force is recapitalizing and reconstituting our aging aircraft fleet. In the mid-1960's, our average fleet age was around 8½ years, by Desert Storm it had climbed to 17 years, and today's fleet average age is over 23 years.

Managing and sustaining these aging airframes strains our resources and personnel as well as our supply systems. In addition, harsh operating environments and increased ops tempo lead to extensive wear and tear on aircraft systems. The sustained high demand for the capabilities provided by fleets comprised of primarily older aircraft continues to delay our ability to reconstitute while accelerating the need for re-capitalization. Also, critical to operating aging fleets is the cost to maintain and sustain them. Although there are no current constraints regarding our depot capacity, it is crucial that we maintain adequate levels of funding for Depot Purchased Equipment Maintenance (DPEM) and Contractor Logistics Support (CLS). We have seen a steady increase in the DPEM requirement with a comparable increase in DPEM funding which has grown from ~$1.6B in FY00 to ~$3.3B in FY04, and CLS funding which has grown from ~$1.8B to ~$2.5B in the same period.

One program we developed to help address aging aircraft issues is the Fleet Viability Board (FVB). We chartered a recurring FVB to provide an unbiased assessment of fleet health. Along with the Fleet Viability Board assessments, we must continue to divest our oldest legacy aircraft to free resources for reinvestment in newer aircraft. This allows us to take advantage of new technology and increasing capabilities.

Thank you for your continued support of the Air Force.

Mr. HEFLEY. Of the services that have stay-behind or remain-behind equipment in Iraq or Afghanistan, how much of that equipment is likely to ever return for repair?

General HULY. The Marine Corps recently conducted an assessment of the Demand on Equipment in theater. This assessment took into consideration actual and projected combat losses and heightened stress placed on equipment due to the OPTEMPO and environmental impact. Equipment that cannot be repaired in theater is transported from Iraq back to CONUS for evaluation and induction into the depot maintenance cycle. For equipment that is experiencing heightened usage, the

objective is to rotate it systematically to replace tired equipment with fresh equipment before it becomes unserviceable/irreparable.

To date, the USMC has had two ships sets of gear return to CONUS for replacement/refurbishment with three additional ships scheduled for return over the next several months. We continue to monitor equipment, the replenishment cycle, and will leverage opportune lift for air return of retrograde assets as well as surface return for ground equipment assets.

We recognize the need to automate this decision process and are developing a tool that integrates equipment usage rates, combat losses, and cost factors from our operating forces, program managers, and our Marine Corps Logistics Command. This Total Life Cycle Management Tool will provide a mechanism from which future sound, prudent, mission-focused Marine Corps management decisions can be made regarding equipment maintenance and/or new acquisitions.

Mr. HEFLEY. Of the services that have stay-behind or remain-behind equipment in Iraq or Afghanistan, how much of that equipment is likely to ever return for repair?

Admiral HUGEL. Unless the equipment is deemed beyond economical repair or suffers from extensive battle damage, we anticipate all of the equipment to return for servicing. Aviation Support Equipment in part due to quantity and size, is rotated via Maritime Prepositioning Force (MPF) ships as the Marine Air Wing (MAW) rotates into theatre. Aircraft are rotated back in keeping with their peace time established depot maintenance schedule. Seabee equipment is also rotated primarily through MPF ships.

Mr. HEFLEY. Of the services that have stay-behind or remain-behind equipment in Iraq or Afghanistan, how much of that equipment is likely to ever return for repair?

General WETEKAM. Most equipment used by the Air Force is sustained under a maintenance concept that doesn't require it to return to the United States for repair. Air Force equipment is used, inspected, serviced and maintained at the location of use until the equipment is neither no longer necessary or has completed it's life cycle. If the equipment is no longer necessary and is still serviceable, it is reallocated to other valid users within the Air Force. If the equipment has reached the end of it's lifecycle, it is demilitarized (if necessary) and disposed of via established disposal processes. For that very small population of equipment items requiring return to the United States for repair, e.g., materiel handling equipment, selected communications-electronics equipment, etc., the Air Force returns that equipment to the government depot system or private sector contractors for repair and/or overhaul.

Mr. HEFLEY. To what extent do you have the ability to perform depot maintenance in Iraq, Afghanistan or Kuwait?

General HULY. Currently limited depot maintenance is being conducted in theater. The lack of infrastructure inhibits our ability to create this capability. However, the ability of CONUS based depots to respond to GWOT requirements remains high.

The Marine Corps and the Army are partnering to leverage heavy maintenance support for ground vehicles in Iraq. The first facility to implement this partnership is the Army's HMMWV Service Center. The Service Center will provide preventive, corrective, and heavy maintenance support in several locations throughout the area. In addition to the HMMWV, 13 systems that are common to both the Marine Corps and Army have been identified as candidates for joint repair capability. Currently the Marine Corps units in theater have the resident maintenance capability and expertise to sustain its units up to depot level maintenance. We will continue to expand this partnership and leverage common repair facilities where at all possible.

Marine aviation has a limited depot-like repair capability in the Iraq Theater. We have facilities in theater with depot artisans; this provides capabilities tailored to the requirements of the deployed rotary wing units (fixed wing depot capability is almost exclusively resident in CONUS). Complete full depot-level maintenance is not done in Iraq; as such work requires infrastructure and tools not available there. For example, we have artisans in theater that can conduct aircraft battle damage assessments and some associated repairs, as well as structural analysis and deep cleaning. Standard depot work such as complete rebuilding of components, however, cannot usually be done at these limited facilities. A Memorandum Of Agreement with the US Army has allowed us to leverage their depot-like capabilities in Afghanistan when required to support Marine aircraft detachments operating there.

Mr. HEFLEY. To what extent do you have the ability to perform depot maintenance in Iraq, Afghanistan or Kuwait?

Admiral HUGEL. For Aviation Support Equipment, we maintain the ability to do emergent field depot maintenance and battle damage repair using flyaway depot artisans in theatre both ashore and afloat. Battle damage or emergent repairs that

require extensive depot rework must be returned to CONUS. Normal peacetime scheduled depot level maintenance is performed only in CONUS. For Navy Seabee equipment, we do not perform depot level maintenance in Iraq, Afghanistan or Kuwait.

Mr. HEFLEY. To what extent do you have the ability to perform depot maintenance in Iraq, Afghanistan or Kuwait?

General WETEKAM. The Air Force neither has nor requires physical depot capabilities in Iraq, Afghanistan or Kuwait. Depot maintenance is the heavy repair work that requires specialized equipment, facilities and skills not found within our deployed maintenance forces. As a result, the Air Force returns equipment requiring repair and/or overhaul to organic and contract depot repair facilities throughout the globe. On a selective basis, theater maintenance is complemented by deployable expeditionary depot maintenance support via Combat Logistics Support Squadron (CLSS) teams, Contract Field Teams (CFTs) and/or Depot Field Teams (DFTs).

Mr. HEFLEY. To what extent do you have the ability to perform depot maintenance in Iraq, Afghanistan or Kuwait?

General CHRISTIANSON. We do not perform depot level maintenance on the equipment in theater. Rather, the U.S. Army Materiel Command (AMC) and its subordinate commands have established Forward Repair Activities (FRA) which provide a repair and return capability and a flexible response to urgent requirements, such as the application of Add-on Armor kits. Employees from our depots and commercial contractors perform the work at the FRAs. The FRAs are specialized and vary in size based upon the Warfighers' requirements. Supporting aviation, ground vehicles and electronic equipment, these FRAs are located in Kuwait, Afghanistan, and at three sites in Iraq.

Mr. HEFLEY. What is the difference between the Army's RESET program and the Recapitalization program?

General CHRISTIANSON. The Army's Recapitalization program is depot repair, based on an extensive maintenance scope of work, that rebuilds our equipment to a near, zero time/zero mile condition. Through this effort, we extend the service life of our aging fleets. The result of the Recapitalization program is sustained system readiness through improved reliability and availability.

The Army's Reset program is a series of actions to restore returning units to a desired level of combat capability. Returning equipment is repaired to address the damage inflicted by heavy usage in a desert environment. Some of this repair work is below depot level maintenance, accomplished in the unit motor pools or other maintenance facilities. Some equipment requires work that can only be accomplished with the skills and equipment available in depot facilities. The high operational tempo in theater places some equipment under great stress. In effect, a year operating within theater equates to five or six years of operation in peacetime for some equipment. To mitigate this accelerated aging of the fleets, we are applying the Recapitalization scope of work to the returning equipment in the worst condition. Reset also includes the procurement of new equipment to replace battle losses and equipment that is not economically repairable.

QUESTIONS SUBMITTED BY MR. REYES

Mr. REYES. Are there reports that can give us a comparison of readiness rates at the beginning of the conflict versus now?

General CHRISTIANSON. During the initial phase of the conflict, the Army experienced readiness rates below the DA Goal for some critical combat weapon systems. During this time, readiness was challenging because of the supply pipeline and theater distribution system in an immature theater. The theater is currently matured and many of the initial shortcomings have been resolved. For the past year, the Army has shown a positive trend in maintaining its critical combat systems (M1, M2/3, M109A6, MLRS, PATRIOT, AH–64, UH–60, OH–58D & CH–47D) resulting in exceeding the Department of the Army (DA) Goal (90 percent for ground and 75 percent for air) in the past six months for all systems except the AH–64 and CH–47 in the OIF/OEF theater of operation. Although the AH–64 and CH–47D trends are slightly below the Army goal, the materiel readiness did not hamper any operational missions. The Army has established Forward Repair Activities, Field Service Representatives and Contract Maintenance to assist in maintaining the combat weapon systems in support of Operation Iraqi Freedom in which track vehicles are being used at five times and aviation two to three times their peacetime OPTEMPO. The theater has the highest priority for CL IX repair parts and any systemic materiel or maintenance issues are discussed at the senior leaders' weekly HQDA VTC with the theater. We have made significant progress in filling supply requests by

fielding satellite connectivity to the very forward edge of the battlefield for logisticians. Before this improvement, it took several days, on average, for a repair part request to be sent to CONUS. Today, it takes less than a half day. This has made a significant difference in the ability to support deployed forces. Additionally, the Army and DLA have established substantial supply facilities in Kuwait. Thirty-five to forty percent of repair parts requests required in Iraq are shipped from Kuwait. The emphasis on theater readiness, however, has hampered efforts to maintain readiness in non-deployed units. As RESET of returning units is conducted and depot level programs, to include RECAP, are conducted, the Army expects readiness in non-deployed units to also improve.

QUESTIONS SUBMITTED BY MR. TAYLOR

Mr. TAYLOR. Status and thoughts on the program to replace fuel pods on the C–130.

General HULY. The USMC is actively focused on rapidly upgrading the refueling pods to address the issues noted by Mr. Taylor. The refueling pods issues constituted a Part I deficiency identified during Operational Test and Evaluation. Currently (as of June 2005) five aircraft have the upgraded refueling pod system. Four of these aircraft are located at MCAS Miramar, and the other is the test aircraft at Pax River (VX–20). There is a detailed plan to perform this upgrade on all remaining aircraft; we expect to upgrade approximately two aircraft per month, which should complete the upgrades by June 2006.

QUESTIONS SUBMITTED BY MR. HAYES

Mr. HAYES. You are confirming what we had feared. The MCS study was due at the end of March; now it comes out at the end of April. I am pretty sure we use that as another way of letting folks up here know what the situation is. At Pope, we have got 31 aircraft grounded, seven or eight limited flying status, 20 percent of the fleet, 84 of which are on active duty on restricted weight capabilities. We have just got to keep hammering the fact that recapitalization, that is keeping our young men off the ground in Iraq and Afghanistan and increasing safety.

Talk at length about the continued, not just procurement as it is now outlined-and hopefully, we have corrected the initial oversight in the budget for continuing production. Speak to that, and then speak to the issue of what really we need, and that is more C–130Js than was initially projected. And anyone else that would like to speak in the range of whoever uses them, I would love to have your comments for the record. We need those aircraft badly.

General WETEKAM. As you know, the C–130 has proven to be one of the most effective air lifters in the Air Force since the first A model entered the inventory in the late 1950's to the current E, H and J models. It has been involved in every major conflict from Vietnam to Iraqi Freedom. The stated requirement for C–130 combat delivery intra-theater airlift is a minimum of 421 E/H equivalents, a mix of C–130 E, H and J model aircraft. In order to meet that requirement, the Air Force is currently modernizing the intra-theater fleet through the C–130 Avionics Modernization Program (AMP) and will continue to recapitalize the oldest most problematic C–130s with the C–130Js. Moreover, the Air Force, through the MCS and QDR, as well as the Joint Intra-theater Airlift Study, will refine the intra-theater airlift requirement and force mix for the total force.

QUESTIONS SUBMITTED BY DR. SCHWARZ

Dr. SCHWARZ. The plan is to upgrade, refit, refurbish. What part of that fleet will keep them active and in the inventory, my understanding, until maybe the year 2018, 2020?

General WETEKAM. The plan is to upgrade the entire A–10 inventory of 356 aircraft (203 active duty, 102 Air National Guard, 51 Air Force Reserve Component) with the A–10 Service Life Extension Program (SLEP) and Precision Engagement (PE).

The A–10 SLEP extends the service life to 16,000 operational flight hours, supporting operations through the aircraft retirement in the 2023 timeframe. The SLEP program is designed to increase the A–10 service life through inspections and consolidated structural improvements such as repairs to cracks, removal of corrosion from fuel tanks and replacement of wing leading edges. Estimated cost for the SLEP program is about $2.1M per aircraft for FY05-FY11.

Precision Engagement greatly enhances A–10 operations on the digital battlefield by improving aircraft avionics, integrating a tactical datalink: and a targeting pod, and adding J-series weapons capability (global positioning satellite guided weapons). This $322M program provides significantly greater combat capability for the A–10 and completes in FY09. Precision Engagement upgraded aircraft are designated A–10C.

The A–10 program also has $156M in FY06 through FY08 for system development and demonstration of an engine kit designed to improve engine performance. A decision to procure the engine kits ($1.8B) will be made during the FY08 POM cycle.

QUESTIONS SUBMITTED BY MR. MILLER

Mr. MILLER. Can you, in particular, General, talk about how many aircraft are currently affected by wing box cracks? Given the rate that we have seen over the last year with the problem, can you forecast what we may run into this year? I ask all this to go to the point of the company or companies that produces the wing boxes, do they have the capacity? Are they producing fast enough to be able to replace what needs to be done so that we don't run into a crisis in regards to replacing those parts.

General WETEKAM. As of 20 April 2005, there are 57 aircraft restricted and 31 aircraft grounded. Another four aircraft that experienced grounding center wing box cracks have been retired.

Our forecast estimates 6 additional aircraft will reach the 45K Equivalent Baseline Hours (EBH) threshold and be grounded, and 12 additional aircraft will reach the 38K EBH threshold and be restricted, in the next 12 months.

QUESTIONS SUBMITTED BY MS. DAVIS OF CALIFORNIA

Ms. DAVIS. Thank you, Mr. Chairman, thank you to you all for being here, and for your service, and particularly to General Huly. We miss you, and miss your service in San Diego. I wanted to turn just a second to what could be, I guess, the most personal of all readiness questions, having met with a group of Marines just a few days ago in San Diego, who were being treated at Balboa Hospital.

One of their big concerns was that their weapons jammed, and that even despite their cleaning the weapons constantly, that they still are having a lot of problems, it is hard to get a replacement, and they also mentioned that they would like to have a side arm available to them so that when their weapons jammed that they have a backup.

Could you tell me how you would respond to them when they make those requests, and what we are doing about that?

General HULY. We have queried numerous Marines currently deployed in theater and are not aware of any jamming issues with the Modular Weapon System (M16A4 or M4). No reports of weapons jamming have been received and no documentation of not being able to get replacements is available. The Army recently conducted a lubrication study with Marine Corps participation for small arms due to numerous claims that its existing lubricant was causing malfunctions due to the environment it was being employed in (sandy, dusty). This lubrication study found that the lubricant that is currently in use is, in fact, better than lubricants commercially available for weapons.

The Marine Corps has had an issue with M9 service pistols jamming and an investigation into the cause of the jamming revealed the problem to be a magazine issue. The root cause of the M9 jamming was found to be a surface finish on some contracted magazines that had been issued and these magazines are being removed from the inventory and M9 magazines are being replaced by an improved magazine with a better surface finish and improved feeding reliability.

In reference to having a backup weapon available, Marines are not routinely issued secondary or "backup" weapons. Some key billets, which employ crew served weapons, are issued a secondary weapon because the primary weapon is not intended for use by or protection of an individual.

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