



# Keeping the Army aloft

The U.S. military has been severely taxed by ongoing combat operations in Iraq and Afghanistan. The two ground-fighting services, the Army and Marines, have faced a particular burden, with rising manpower costs and worn down equipment in need of accelerated replacement.

Yet the defense budget shows signs of flattening, after five years of strong growth. This raises questions as to how to pay for the growing recapitalization requirement, and what the budgetary impact will be on other services.

### Endless demands

In addition to more than 3,000 combat deaths, the war in Iraq has taken an enormous toll on the U.S. military. This strain has particularly affected the Army and the Marines. Some two-thirds of the Army's reserve and active forces are ranked as "unready" in terms of equipment and manpower needed to perform stated missions. The remainder of the force is en-

gaged in Iraq. There are no U.S.-based Army brigade combat teams available for rapid deployment.

There are particularly severe problems with manpower. Of 512,000 Army personnel, over 130,000 have served in more than one deployment in Iraq or Afghanistan. There are currently 140,000 troops in Iraq, including Marines. Because of budget and recruitment problems, enlarging this force has proven difficult. The Army now has 37 active and 15 Guard brigades, with authority to build 42 active and 28 Guard.

To achieve this force growth, the Army needs at least 575,000 troops. Yet funding has limited this to the current 512,000. Strangely, defense personnel spending has been relatively static, with \$116 billion provided in FY04 and \$114 billion in FY06.

Most estimates of the cost of replacing worn out or destroyed Army and Marine Corps equipment exceed \$30 billion,

with another \$14 billion for each year of continued engagement in Iraq. These sums do not cover replacing the equipment whose retirement has been accelerated by greater-than-expected utilization. Assuming the Bush administration implements its plan to surge forces by 21,500 troops proceeds, the Army recapitalization bill will grow before it shrinks.

The Army aviation budget provides a good illustration of the equipment replacement budget challenge. Most of this budget goes toward helicopters, which are essential to provide force mobility in conflicts fought in large countries with relatively small forces. They are also essential for rapid casualty evacuation and rapid strikes against enemy combatants.

While few helicopters have been destroyed in these conflicts, operating in hot and often sandy and high-altitude environments such as Iraq and Afghanistan takes a steady toll on dynamic systems. The 1,700 helicopters currently serving in these conflicts are being operated at about five times their normal usage rate. Total Army aviation procurement funding needs to grow from a mere \$1.9 billion in FY02 to a minimum of \$5 billion in FY09. Maintenance and repair budget numbers will also need to grow to keep worn out equipment in service.

### Limited resources

The positive news is that money for new equipment procurement has been forthcoming, even if growth rates are slowing. Total defense procurement budget authority has grown from \$63 billion in FY02 to at least \$105 billion in FY07, with plans for further growth up to \$112 billion in FY10. The Army procurement budget has grown from \$10.4 billion in FY02 to at least \$30 billion in FY07.

The defense budget situation is complicated greatly by supplemental funding, money added to the requested defense

Marines load into a CH-53E Super Stallion helicopter on the flight deck of the amphibious assault ship USS Peleliu. Photo by Petty Officer 3rd Class Nathaniel J. Karl, U.S. Navy.





Marines direct the crew of a CH-53E Super Stallion helicopter as it prepares to pick up a rotor head from a downed CH-53E near Al Qa'im, Iraq, on Dec. 15, 2006. Photo by Cpl. Jonathan K. Teslevich, U.S. Marine Corps.

budget and intended originally to fund items directly associated with fighting the conflicts in Iraq or Afghanistan, particularly fuel, equipment repair, and other unexpected costs not funded by the normal defense budget.

The \$442-billion FY06 defense budget was boosted by \$116 billion in bridge and supplemental funding. The \$443-billion FY07 budget will be boosted by \$70 billion in bridge supplemental funding, with an additional \$110 billion also available for expenditure in FY07 or FY08.

Predictably, these enormous sums have started to fund procurement programs and other long-term requirements not associated with the immediate conflict operations. In 2005, the Army received supplemental funding to start reorganizing its combat units. Procurement of new communications equipment has also enjoyed priority, particularly for SINCGARS (Single Channel Ground and Airborne Radio Systems).

Moreover, most of the procurement funding provided by these supplementals has gone to the Army, hardly surprising

considering its heavy level of engagement and the state of its vehicles and helicopters. FY07 supplemental funding includes a healthy \$9 billion in combat, tactical, and support vehicle funding. While much of this covers upgrades, some will also go to new procurement. In all, the Army will get about \$21 billion of the \$34-billion FY07 supplemental procurement budget.

These supplemental numbers are having a strongly buoyant effect on Army aviation procurement. For example, the CH-47 procurement funding line on our chart provides for the Army's FY07 request for 15 remanufactured and no new CH-47Fs. According to Boeing and the Army, FY07 supplementals will likely provide money for up to 47 new and remanufactured CH-47Fs.

Yet this budget situation presents risks for Army recapitalization. The budget numbers for the CH-47 and to an even greater extent the UH-60 squad helicopter cover a relatively modest stream of aircraft. These numbers are low by historical procurement levels and particularly low given the current strain on existing forces.

These procurement plans were formulated before that strain became apparent, and supplemental spending bills have allowed the Army to avoid adjusting these budget plans upward.

Meanwhile, there is the very real concern that supplemental funding will dry up. Obviously, if the U.S. withdraws from Iraq, the rationale for supplemental funding will disappear. But even if the U.S. stays in Iraq for years to come, Congress will likely lose patience for supplemental funding. After all, these requirements have become predictable, and therefore can be handled through routine budget procedures.

Supplemental funding bills, in theory, are to be reserved for emergencies such as the Afghanistan conflict that immediately followed the September 11, 2001, terror attacks. And Congress' power to approve or deny specific supplemental funding requests can be less than with traditional budget bills, rendering them politically unpopular.

In short, if supplementals go away, either because of a U.S. withdrawal from Iraq or political change, the Army will have a much harder time funding recapitalization of its forces. The currently planned budgets are not up to the job.

### Recapitalization vs. everything else

While attempting to replace its existing vehicles and aircraft, the Army is also attempting to reinvent itself with more modern equipment. Its flagship program, Future Combat Systems (FCS), is a \$150-billion program designed to create an entirely new force architecture, with a wide variety of vehicles, artillery, and UAVs. Yet funding for this new equipment will likely wait on funding to rebuild and replace existing systems.

Similarly, the nature of Army procurement is now completely derivative. The primary new squad helicopter is the Sikorsky UH-60M, a modernized version of the original Black Hawk, first procured in 1978. The primary new large helicopter is Boeing's CH-47F, a modernized version of the original Chinook, first procured in 1962. The new scout helicopter, Bell's

RAH-70 Advanced Reconnaissance Helicopter, is an off-the-shelf derivative of Bell's 417 commercial design. And the AH-64D funding provided by the budget covers the Block III program, the second major update for a fleet that was largely procured in the 1980s and rebuilt over the last nine years.

The original new Army scout machine, the Boeing/Sikorsky RAH-66 Comanche, was killed in February 2004, an early victim of the new budget reality. Dreams of new heavy-lift designs using new technologies such as tiltrotor propulsion are effectively dead. The hope of a new-technology joint Army/Marine Corps heavy lifter is also dead. The Army needs the CH-47F immediately; the Marines have begun developing a new K version of their Sikorsky CH-53E heavy lifter.

Clearly, the Army, like the military in general, is caught between force transformation and existing force recapitalization. Inevitably, with ongoing conflicts and the force in difficult shape, recapitalization will continue to win. FCS, once the Army's unquestioned highest priority,

must be regarded as one of the most threatened new defense programs.

There is also the question of the Army's budget relative to the other services. Supplemental spending has permitted the Army to maintain its historic consistent share of the overall budget—about 25% of total defense spending, or about 18% of equipment procurement accounts. (The disparity is inherent in the service's composition—the Army is more manpower reliant and less equipment reliant than the Navy or Air Force.)

Supplemental spending bills have considerably increased these Army budget percentages for the years they are provided. Yet the temporary nature of these supplemental spending packages allows the other services to maintain that these Army increases are



U.S. Army soldiers assigned to the 1st Brigade, 1st Armored Division, wait to board a UH-60 Black Hawk helicopter during an air assault mission in the Al Jazeera Desert, Iraq, on March 22, 2006. Photo by Staff Sgt. Aaron Allmon, USAF.

not going to be maintained. Therefore, if supplemental spending dries up, the Army will either have to suffer low readiness and shrunken force structures, or try to gain procurement budget share at the expense of the other services.

Therefore, as the Army (and Marines) struggle to recapitalize, the Air Force and Navy inevitably will feel a greater budget pinch. The traditional tools of superpower strength—aircraft carriers, strategic and tactical aircraft, bombers, submarines, and many other systems—will basically be shortchanged. The current ongoing funding crises for the F-22 fighter and most shipbuilding accounts, along with the threatened end of C-17 transport aircraft procurement, provide ample testimony that this process is well under way. After Iraq, the U.S. is likely to stay away from manpower-intensive conflicts, and return to a maritime and air approach to power projection. This means that Navy and Air Force systems will again take center stage.

In short, without adequate topline defense budget growth, the price of rebuilding the Army after Iraq could well include the loss of some of the U.S.'s superpower status, too.

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**Erratum** In the January column "Winners and losers in the great aircraft boom," the colors in the chart on page 22 are keyed in the reverse order. A corrected version can be found at <http://www.aiaa.org/aerospace>.

### ARMY AVIATION FUNDING 2005-2011

