CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas Holtz-Eakin, Director

September 3, 2003

Honorable Robert C. Byrd
Ranking Member
Committee on Appropriations
United States Senate
Washington, DC 20510-6025

Dear Senator:

In response to your request, the Congressional Budget Office (CBO) has analyzed the ability of the U.S. military to sustain an occupation of Iraq. In performing this analysis, CBO has made no assumptions about how long the occupation might last or about the size of the force that might be needed.

Over the near term—that is, about the next 12 months—the Department of Defense plans to deploy a substantial fraction of its ground forces for occupation duty in Iraq. Over longer periods, however, the need to maintain training and readiness levels, limit family separation and involuntary mobilization, and retain high-quality personnel would most likely constrain the U.S. occupation force to be smaller than it is today (more than 180,000 U.S. military personnel in and around Iraq). Accounting for those needs, CBO's analysis derives "steady-state" levels of forces that could be assigned to occupation duty and maintained indefinitely.

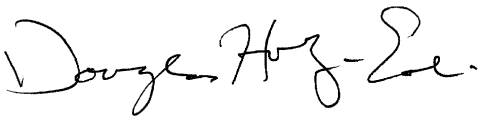
CBO's analysis considers the costs of various options and their effects on the size of a steady-state occupation force. Several of those options involve using existing forces; others involve creating up to two new Army divisions, which CBO estimates would take five years to accomplish. If all existing U.S. ground combat forces in the active and reserve components were used to support an occupation, with units periodically rotated into and out of Iraq, the steady-state U.S. occupation force that could be sustained over the long term would comprise 67,000 to 106,000 military personnel. At that level, the occupation would cost $14 billion to $19 billion a year.

The enclosure describes CBO's analysis, which was prepared by Adebayo Adedeji, Fran Lussier, Paul Rehmus, and Adam Talaber of CBO's National Security Division and by Michelle Patterson and Matthew Schmit of CBO's Budget Analysis Division. If you would like further details, I would

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be pleased to provide them. The staff points of contact are J. Michael Gilmore and Jo Ann Vines, who can be reached at (202) 226-2917 and (202) 226-2840, respectively.

Sincerely,



Douglas Holtz-Eakin
Director

cc: Honorable Ted Stevens
Chairman
Senate Committee on Appropriations

Honorable Don Nickles
Chairman
Senate Committee on the Budget

Honorable Kent Conrad
Ranking Member
Senate Committee on the Budget

Honorable John Warner
Chairman
Senate Committee on Armed Services

Honorable Carl Levin
Ranking Member
Senate Committee on Armed Services

Honorable C.W. Bill Young
Chairman
House Committee on Appropriations

Honorable David R. Obey
Ranking Member
House Committee on Appropriations

Honorable Jim Nussle
Chairman
House Committee on the Budget

Honorable John Spratt
Ranking Member
House Committee on the Budget

Honorable Duncan Hunter
Chairman
House Committee on Armed Services

Honorable Ike Skelton
Ranking Member
House Committee on Armed Services

An Analysis of the U.S. Military's Ability to Sustain an Occupation of Iraq

September 3, 2003

Congress of the United States
Congressional Budget Office



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Summary and Introduction

More than 180,000 U.S. military personnel are currently involved in the occupation of Iraq—about 150,000 of them deployed in Iraq itself and the rest supporting the occupation from neighboring countries (primarily Kuwait). According to the Department of Defense (DoD), the occupation is costing about $3.9 billion a month to sustain. At the request of the Ranking Member of the Senate Appropriations Committee, the Congressional Budget Office (CBO) has examined the United States' capability to sustain an occupation force in Iraq over the long term and the associated costs.

In performing its analysis, CBO made no assumptions about how long the occupation might last or about the size of the force that might be necessary. Instead, CBO's work focused on determining how large an occupation the U.S. military could sustain in Iraq indefinitely—while still maintaining acceptable levels of military readiness and not jeopardizing the quality of the all-volunteer force—under various policy options. Those options include using only combat troops from the Army's active component for the occupation, employing other existing U.S. ground forces as well, and expanding current forces to incorporate two additional Army divisions.

CBO's analysis indicates that the active Army would be unable to sustain an occupation force of the present size beyond about March 2004 if it chose not to keep individual units deployed to Iraq for longer than one year without relief (an assumption consistent with DoD's current planning).[1] In the six to 12 months after March, the level of U.S. forces in Iraq would begin to decline as units that had been deployed for a year were relieved and were not replaced on a one-for-one basis.[2] After the winter of 2004-2005, the United States could sustain—indefinitely, if need be—an occupation force of 38,000 to 64,000 military personnel using only combat units from the Army's active component (and some support units from the reserves), the option that constitutes the base case in this analysis. With a force of that size, the occupation would cost $8 billion to $12 billion per year, CBO estimates (see Summary Table 1). Those and other costs shown in this analysis are in 2004 dollars.

A larger occupation force could be sustained in Iraq (given the current overall size of the U.S. military) if DoD employed additional forces, including Marine Corps units, Army special-forces groups, and combat units from the Army Na-

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1. That result is consistent with the Army's plan for rotating relief forces to Iraq for occupation duty (shown in Table 1 on page 7). By January 2004, that plan would replace units currently in Iraq with a lesser number of units, according to a briefing presented to the Congress by General Jack Keane, Acting Chief of Staff of the Army, on July 23, 2003.

2. That conclusion is based on the additional assumption that DoD would not send units to Iraq that had returned from occupation duty to their home station within the past year.

Summary Table 1.
Options and Costs for Sustaining a U.S. Military Occupation of Iraq

Option	Combat Brigades in Iraq	Total Military Personnel in Iraq	Cost (Billions of 2004 dollars)	
			Annual	Up Front
Occupation Under Base Case				
Use Only Active Army Forces	3 to 5⅔	38,000 to 64,000	8.0 to 11.6	n.a.
Additions from Options to Use Other Existing Forces[a]				
Eliminate Requirement for Rapid-Reaction Forces	+1 to 1⅓	+10,000 to 12,000	+1.7 to 2.0	n.a.
Employ Army National Guard Units	+1⅔ to 2⅓	+8,000 to 11,000	+1.9 to 2.2	n.a.
Employ Army Special-Forces Units	No change	+2,000 to 3,000	+0.3 to 0.4	n.a.
Employ Active Marine Corps Regiments	+⅓ to 1	+6,000 to 12,000	+1.0 to 1.9	n.a.
Employ Marine Corps Reserve Regiments	+⅓	+4,000 to 5,000	+0.9	n.a.
Subtotal	6⅔ to 10⅔	67,000 to 106,000	13.9 to 19.0	n.a.
Additions from Options to Expand the Size of the Active Army[a]				
Create Two New Divisions (Available after five years)	+1⅔ to 2	+18,000 to 23,000	+9.5 to 10.1	+18.0 to 19.4[b]
Total Occupation Under All Options				
Total Available After Five Years	8 to 12⅔[c]	85,000 to 129,000[c]	23.4 to 29.0	18.0 to 19.4
Memorandum:				
Additions from Reducing Other Troop Commitments[d]	+2⅔	+12,000 to 13,000	Not estimated	Not estimated

Source: Congressional Budget Office.

Notes: The numbers in this table assume that the Department of Defense employs a policy of unit rotation to sustain the U.S. occupation force in Iraq. Numbers may not add up to totals because of rounding.

n.a. = not applicable.

a. Changes relative to the base case.
b. This estimate assumes that the divisions would be equipped entirely with new, modern equipment. If surplus equipment was available for those units, costs would be lower, perhaps significantly so.
c. There are currently about 18 U.S. combat brigades and more than 180,000 military personnel involved in the occupation of Iraq.
d. Assumes that all existing forces are being used to support an occupation.

tional Guard.[3] In that case, CBO estimates, the United States could sustain an occupation force of 67,000 to 106,000 military personnel. At that level, the occupation would cost $14 billion to $19 billion a year.

If DoD created additional units—either by increasing the overall size of the Army or by transferring some overhead functions to civilians to free up military personnel—the size of the sustainable occupation force could be increased. For those options, CBO looked at how expanding the Army's active component by two divisions (along with additional support units) would affect costs and the size of the sustainable occupation. Two added divisions and their support units would expand the occupation force that could be sustained in Iraq by about 18,000 to 23,000 military personnel. Recruiting, training, and equipping two additional divisions would entail up-front costs of as much as $18 billion to $19 billion and would take about five years to accomplish, CBO estimates. In the long run, the cost to operate and sustain those new divisions as a permanent part of the Army's force structure would be about $6 billion annually (plus between $3 billion and $4 billion per year to employ them in Iraq). Once those two divisions were available, using them to support an occupation—in addition to employing all of the other forces in the previous options—would enable the United States to sustain an occupation force of 85,000 to 129,000 personnel, at an annual cost of $23 billion to $29 billion.

CBO also examined several other policy choices, including ending U.S. participation in peacekeeping operations in Bosnia, Kosovo, and the Sinai Peninsula and withdrawing Marine Corps ground forces from Okinawa. Terminating those U.S. commitments would increase the occupation force that could be sustained over the long term in Iraq by 12,000 to 13,000 personnel.

For all of the cases it considered, CBO also estimated the number of U.S. ground forces that would be immediately available to use for operations other than the occupation of Iraq, including a major war (see Summary Table 2).[4] In most cases, the forces immediately available for other missions would be at least as large as

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3. Marine Corps forces, Army National Guard combat units, and special-forces groups are currently being used in the occupation. However, over the past decade, DoD has not generally chosen to employ Marine Corps units and special forces for peacekeeping and it has made limited use of National Guard units (as in Bosnia and Kosovo) for that purpose. CBO's analysis treats the use of all of those forces for occupation duty in Iraq over the long term as a distinct policy choice.

4. Active-component forces that are not in Iraq, have not just been deployed to Iraq, and are not involved in other commitments are immediately available to perform other missions. If such missions arose and those forces were used, the size of the occupation that could be sustained in Iraq over the long term would be reduced. In the short term, however, the size of the occupation would not have to change if tours of duty in Iraq were lengthened and the time available for units to train and reconstitute was correspondingly shortened.

Summary Table 2.
Forces Available for Other Missions and Reserve Personnel Mobilized for Iraq

Option	Combat Brigades Available for Other Missions[a]	Reserve-Component Personnel Mobilized for Iraq[b]
Base Case (Use only active Army forces)	23⅓ to 18	26,000 to 37,000
Use All Existing Forces	20⅓ to 13⅔	53,000 to 69,000
Use All Existing Forces and Two New Divisions	23⅓ to 15⅔	62,000 to 80,000
Use All Existing Forces and Reduce Other Commitments	20⅔ to 14	67,000 to 81,000

Source: Congressional Budget Office.

a. DoD's planning in the 1990s, under the "two-major-theater-wars strategy," assumed that 20 to 21 combat brigades would be required to prosecute a major theater war. In Operation Iraqi Freedom, major combat operations were conducted with about 12 U.S. and three British combat brigades.

b. The number of reserve-component personnel who would be mobilized (shown here) is larger than the number who would actually be deployed to Iraq, because of the need for predeployment training and for reservists to fill in for active-component personnel deployed outside the United States. During the mid- and late 1990s, about 35,000 reservists were activated at any time during a year. Since September 11, 2001, the average number of reservists mobilized per year has risen to about 50,000. About 190,000 reservists are currently mobilized to support U.S. military operations worldwide.

the combined U.S.-British ground forces used during the major combat portion of Operation Iraqi Freedom.

Finally, CBO examined how the various options in this analysis would affect the total number of reserve-component personnel who would have to be mobilized to support the Iraq occupation. That number would average between 26,000 and 81,000 reserve personnel annually depending on the specific option (see Summary Table 2).

This analysis did not evaluate the potential for U.S. allies to contribute forces to the occupation of Iraq. About 12,000 British military personnel are now taking

part in the occupation, and the Administration is attempting to obtain substantial assistance from other countries. Some U.S. allies have other military commitments that they must sustain. Moreover, many allies employ relatively large numbers of conscripts with very short tours of duty, who may not be suitable for occupation duty (and who, in some cases, are prevented by legal restrictions from participating in an overseas occupation). Because of limitations imposed by equipment, doctrine, and training, U.S. allies that are not members of the North Atlantic Treaty Organization may also have problems interoperating with U.S. forces. Notwithstanding those challenges, the potential exists for substantial non-U.S. participation in the occupation, but it is a potential that CBO cannot assess quantitatively and that does not affect this analysis.

The estimates included in this analysis represent the incremental costs that DoD could incur above the budgeted costs of routine operations. As a result, those estimates exclude items such as basic pay for active-duty military personnel but include monthly pay for reservists called to full-time duty. The estimates for creating new divisions represent the incremental funding needed to equip and maintain the new forces above the currently planned level of 10 divisions and 480,000 personnel in the active Army. (The estimates associated with the occupation of Iraq are lower on a per-person basis than the estimate that CBO published in September 2002, for reasons that are explained in Appendix A of this analysis.)[5]

CBO's estimates of the costs of occupying Iraq and creating new divisions are uncertain. If information about actual costs experienced to date in Iraq was available, CBO would use actual costs to estimate the costs of occupation; however, such information is unavailable. Thus, CBO used widely accepted cost relationships to estimate occupation costs. The agreement between those relationships and actual experience is good, but it is not exact. Moreover, CBO's estimates for creating new divisions assume that the divisions are equipped entirely with new equipment of the most modern type available. If, instead, surplus equipment was used for those divisions, up-front costs would be lower.

Analyzing Sustainable Levels of Occupation Under Current Forces and Policies

More than 180,000 U.S. military personnel are now deployed to the Iraqi theater of operations (which includes Kuwait). Over 165,000 of them are Army soldiers, including the equivalent of about five divisions' worth of combat forces. Although some Air Force and Navy personnel will almost certainly be involved in

5. That earlier estimate of the costs of occupation was contained in Congressional Budget Office, *Estimated Costs of a Potential Conflict with Iraq* (September 2002).

the U.S. force in Iraq, the bulk of the units and personnel needed in the occupation will be ground troops.[6]

The Army recently released a rotation plan that envisions gradually reducing the size of the occupation force in Iraq while relying in part on Army National Guard and foreign contingents to assist the occupation (see Table 1). Over the next 12 months, DoD plans to deploy a substantial fraction of its ground forces for occupation duty in Iraq. Over longer periods of time, however, the need to maintain levels of training and readiness, limit family separation and involuntary mobilization, and retain high-quality personnel would most likely constrain the U.S. occupation force to be smaller than its current size. Accounting for that need, CBO's analysis estimates "steady-state" force levels that could be assigned to occupation duty and maintained indefinitely.

Under the Army's plan, units will remain in Iraq for no more than one year and will then be rotated out of the theater. Some units that are rotated out will be replaced with U.S. forces; some will be replaced with coalition forces; and some are not scheduled to be replaced at all. About half of the combat units in the Army's active component are now serving in Iraq. Since the majority of those units arrived in Iraq between February and April 2003, and many of the Army's other units are assigned to other commitments, the Army does not have enough active-component forces to simultaneously maintain the occupation at its current size, limit deployments to one year, and sustain all of its other commitments. Although the Army's plan envisions limited use of Army National Guard combat units, the size of the U.S. occupation force in Iraq would slowly be reduced during 2004. The rate and timing of that reduction are consistent with CBO's analysis, which indicates that if deployments were limited to one year and if no additional Army National Guard combat units were mobilized, an occupation force of the present size could not be maintained past March 2004.

Current Force Structure and Assumptions About Employing Forces

The active component of the Army contains about 300,000 military personnel in deployable units, about half of whom are organized into maneuver units (10 divisions, with 33 brigade combat teams). The other half are assigned to various

6. Navy and Air Force units may be called on to provide some level of air coverage over Iraq, as well as air transport. In fiscal year 2002, the cost of providing air coverage for the Balkans was about $150 million. For Operations Northern Watch and Southern Watch (enforcing the no-fly zone over Iraq), the cost of providing air coverage was about $1 billion in 2002; however, the continuing need for air coverage over Iraq should be less than conducted under Northern Watch and Southern Watch.

Table 1.
The Army's Plan for Using Unit Rotation to Occupy Iraq

Unit Now in Iraq	Planned Replacement Unit	Projected Transition Date
3rd Infantry Division(-)[a]	82nd Airborne Division(-)[a]	September 2003
1st Marine Division	Polish Multinational Division	September/October 2003
2nd Brigade, 82nd Airborne Division	None	January 2004
101st Air Assault Division	Multinational Division	February/March 2004
1st Armored Division	1st Cavalry Division and National Guard Brigade	February/April 2004
2nd Cavalry Regiment	Brigade from 1st Cavalry Division	March/April 2004
3rd Armored Cavalry Regiment	Stryker Brigade	March/April 2004[b]
4th Infantry Division	1st Infantry Division(-)[a] and National Guard Brigade	March/April 2004
173rd Airborne Brigade	None	April 2004

Source: U.S. Army.

a. The Army denotes a division without its full complement of three combat brigades as a "division(-)."

b. The Stryker Brigade will arrive in October 2003 and overlap with the 3rd Armored Cavalry Regiment until March or April.

corps- and theatre-level support units (see Table 2).[7] The Army's reserve component has about 470,000 military personnel in deployable units. Of those, about one-third are organized into maneuver units (8 divisions, with about 36 brigade

7. The Army uses "maneuver units" as a generic term for all forms of "front-line" combat units—infantry, armor, mechanized infantry, airborne, cavalry, and so forth. All other units can be considered support units of some type.

Table 2.
Deployable Ground Forces in the Army and Marine Corps

	Combat Brigades	Personnel
	Army	
Active Component		
Combat units	33	175,000
Support units	n.a.	125,000
Reserve Component		
Combat units	36	180,000
Support units	n.a.	290,000
	Marine Corps	
Active Component		
Combat units	8	45,000
Support units	n.a.	125,000
Reserve Component		
Combat units	3	20,000
Support units	n.a.	15,000
	All Ground Forces	
Active Component	41	470,000
Reserve Component	39	505,000
Total	80	975,000

Source: Congressional Budget Offoce.

Note: n.a. = not applicable.

combat teams), and the other two-thirds serve in corps- and theatre-level support units.

The Marine Corps's active component contains about 170,000 military personnel in deployable units, who are organized into three divisions (with eight infantry regiments, the equivalent of Army brigades), three air wings, and three support

groups.[8] The reserve component of the Marine Corps has about 35,000 military personnel, organized into a division (with three infantry regiments), an air wing, and a support group.

In examining the occupation of Iraq, CBO used brigade-sized maneuver units —brigade combat teams (BCTs) for the Army and Marine expeditionary brigades (MEBs) for the Marine Corps—as the primary unit of analysis.[9] The Army has employed brigade-sized forces in peacekeeping operations over the past decade, and most Army and Marine Corps commitments can be measured by the number of brigades employed.

Other Commitments for Combat Forces. The base case in CBO's analysis assumed that both the Army and the Marine Corps would continue to maintain all of their current commitments during the occupation of Iraq.[10] Those commitments, which now employ 15 combat brigades, consist of:

- Maintaining 2 active Army BCTs in Korea;
- Maintaining 4⅓ active Army BCTs as rapid-reaction forces;[11]
- Deploying 2 active Army BCTs to Afghanistan;
- Deploying 1 Army National Guard BCT to Bosnia;

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8. Unlike the Army, the Marine Corps does not maintain large numbers of corps- and theater-level support units. The largest Marine Corps formation is the Marine expeditionary force (MEF), which is normally composed of one division, one air wing, and one support group. In major combat operations, however, MEFs normally receive substantial support from Army units, and they can be (and have been) incorporated as elements within Army corps.

9. Army BCTs include a maneuver brigade and some types of support units. Most Army divisions are equivalent to three BCTs, and separate Army brigades and armored cavalry regiments are equivalent to a single BCT. A Marine expeditionary brigade is similar to a BCT but includes an infantry regiment and a different mix of support units.

10. The Army's and Marine Corps's commitments could change over the long term, however. DoD is currently considering realigning its global force posture. Some of the alternatives it is considering, such as rotating Army units through southern Europe, could increase the number of forces needed to support the Army's other commitments and decrease the number of forces available for the occupation of Iraq.

11. The Army tries to keep several BCTs at a high level of training and readiness and free from other commitments in order to respond rapidly to any contingencies that may arise. Those units would be expected to be the first to deploy to any new crisis.

- Deploying 1 Army National Guard BCT to Kosovo;[12]
- Deploying ⅓ of an Army National Guard BCT to the Sinai Peninsula;
- Converting 2 Army BCTs into Stryker BCTs (equipped with the Army's new light armored vehicle);[13]
- Providing 4 Marine expeditionary units (MEUs) for amphibious ready groups;[14] and
- Maintaining 1 Marine regiment in Okinawa.

The Need for Support Units. CBO's analysis also considered the types of support units available to the Army and Marine Corps and the missions for which they are equipped and trained. CBO assumed that some types of corps- and theater-level support units would not be used in the occupation of Iraq (including Marine Corps fixed-wing aviation, Army field artillery, Army air-defense artillery, and Army chemical units). Other types of support units (such as those performing most logistics functions) would be needed for the occupation but at reduced levels from those associated with major combat operations. Finally, some types of specialized support units (including military police, civil affairs, and psychological-operations units) have been in high demand for peacekeeping missions during the past decade, and CBO assumed that they would be fully committed to the occupation.

Unit Rotation

The Army's plan for occupying Iraq into 2004 adopts a policy of unit rotation, as the service has done with peacekeeping operations for the past decade. Unit rotation is the practice of moving an entire unit to a theater, maintaining it in place (generally for six to 12 months), and then moving the entire unit home, while replacing it with another unit. Unit rotation is different from the individual-rotation policy now used in South Korea and employed during World War II, the Korean War, and the Vietnam War. Individual rotation maintains the same unit in theater over time but moves individual soldiers into and out of the unit. (For a discussion

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12. Currently, the peacekeeping operation in Kosovo is the responsibility of the active Army. However, the Army plans to transfer that duty to the National Guard in February 2004.

13. Under current plans, the Army will not be converting units into Stryker BCTs for an indefinite period of time. Over the long term, however, the Army does intend to convert two BCTs per year into Objective Force units when the Future Combat System is fielded. Thus, CBO assumed that two BCTs would be unavailable for the indefinite future because of unit conversions.

14. MEUs are approximately one-third the size of MEBs.

of the issues associated with using individual rotation to sustain an occupation, see Appendix B.)

A unit-rotation policy is based on the idea that forces will be periodically withdrawn from the theater for recovery and training. The effect is that only a fraction of the available units will actually be in the theater at any given time, with other units in various phases of a recover/train/prepare/deploy cycle. The fraction of units and personnel that can be sustained overseas depends on the length of that cycle and is often expressed as a ratio. For example, a 4:1 rotation cycle would require that for every brigade deployed to Iraq, another three brigades would be in different phases of the cycle, so a total of four brigades would be needed to sustain the single brigade deployed overseas. In principle, a low rotation ratio could represent either very efficient use of units or inadequate time for recovery and training (with potentially adverse effects on the quality of the force). A high rotation ratio could imply the opposite possibilities.

CBO estimated a range of sustainable rotation ratios for U.S. military commitments by considering how different rates of deployment would affect personnel assigned to deployable units.[15] Although the Army currently plans to support operations in Iraq by rotating units (rather than individuals) through the theater, the duration and frequency of a particular unit's rotation would be limited—in part to ensure that soldiers in that unit did not suffer from unduly high levels of family separation, time away from home, or degradation of needed skills because of a lack of training opportunities. CBO's analysis indicates that rotation ratios of between 3.2:1 and 4:1 span the range expected to be feasible over the long term for active-component units. The feasible range for reserve-component units is between 7.5:1 and 9:1. (Appendix C explains how CBO estimated those ratios.)

In most of DoD's major operations, some number of reserve personnel are mobilized to fill in for deployed active-component units in a variety of functions (a practice referred to as "backfill"). In a sustained occupation of Iraq, the need for backfill personnel would increase the number of reserve personnel who would have to be mobilized. However, those additional personnel would not be deployed to Iraq but instead would replace absent active-component units at their home stations (generally in the United States).

For each option in this analysis, including the base case, CBO analyzed the effect that deploying forces to Iraq would have on the pool of ground forces available to DoD for other operations, including fighting a major war. (The results of that analysis are detailed in Appendix D). In the base case, DoD would have 18 to

15. Only about 62 percent of Army personnel are assigned to deployable units. Another 25 percent are assigned to units that typically do not deploy, and the remaining 13 percent are primarily trainees, students, or personnel moving between assignments.

23⅓ combat brigades immediately available for other missions. By comparison, DoD's planning in the 1990s, under the two-major-theater-wars strategy, assumed that 20 to 21 combat brigades would be necessary to prosecute a single major theater war. Operation Iraqi Freedom, however, was conducted with about 12 U.S. and 3 British combat brigades.

Sustainable Levels of Occupation Under Various Options

CBO examined several options to illustrate the effects of various policy choices on the U.S. military's ability to sustain an occupation of Iraq over the long term and on the costs of that occupation. Although those options were selected to be representative of choices being considered by DoD and in public debate, they do not span the full range of possibilities.

Base Case: Sustain the Occupation with Only Active Army Combat Brigades

CBO's base case assumes that the occupation of Iraq would be sustained using only combat brigades from the active Army and employing a policy of unit rotation.[16] The Army would continue to maintain all of its other commitments at their current levels. Under those assumptions, DoD would not be able to sustain the current size of the occupation force in Iraq beyond March 2004. Over the following six to 12 months, the size of that force would begin to decline toward the long-term steady-state levels described below as the pool of active units that had not been deployed within the previous year was exhausted.

Assuming that rotation ratios of 3.2:1 to 4:1 are the ones that are sustainable over the long term, CBO estimates that DoD would be able to maintain an occupation force of 38,000 to 64,000 military personnel in Iraq under the base case—equivalent to 3 to 5⅔ combat brigades. The incremental cost of keeping such a force in Iraq would total between $8 billion and $12 billion a year, CBO estimates. On average, about 26,000 to 37,000 reserve personnel would be mobilized to support that occupation (see Table 3).[17]

In addition, DoD would have 18 to 23⅓ combat brigades immediately available for other missions under the base case. The remainder of U.S. forces would be

16. Only active-component combat brigades would be employed in this case, but support units from the reserve component would still be needed. The Army's current structure makes it extremely difficult for the active component to engage in any major operation without using reserve units for support.

17. The number of reserve personnel includes not only support units deployed to Iraq but also personnel engaged in training cycles and backfill.

Table 3.
CBO's Base Case

Combat Brigades in Iraq	3 to 5⅔
Combat Brigades Available for Other Missions	23⅓ to 18
Total Military Personnel in Iraq	38,000 to 64,000
Reserve-Component Personnel Mobilized	26,000 to 37,000
Annual Cost (Billions of 2004 dollars)	8.0 to 11.6

Source: Congressional Budget Office.

either deployed overseas or recovering after a deployment (see Table D-1 in Appendix D).

Options to Expand the Occupation Force Beyond the Base Case Using Existing Forces

If DoD chose to use more of its currently available forces to occupy Iraq in addition to active Army combat brigades, it could sustain a larger occupation force over the long term. CBO analyzed the effects of various options to employ existing forces from the active Army, the Army National Guard, or the Marine Corps. DoD could choose to implement any combination of those options along with the base case. If it implemented all of them, the U.S. military could sustain an occupation of 67,000 to 106,000 personnel in Iraq—equivalent to 6⅔ to 10⅔ combat brigades—at a cost of $14 billion to $19 billion annually.

Eliminate the Requirement for Army Rapid-Reaction Forces. In this option, the Army would no longer retain its dedicated rapid-reaction forces—units that the service tries to keep available, at a high standard of readiness, to respond to any new contingencies that may develop. Those forces include a brigade of the 82nd Airborne Division (called the Division Ready Brigade, or DRB), a brigade of the 101st Air Assault Division, a heavy brigade (usually from either the 3rd or 4th Infantry Division), the 173rd Airborne Brigade (the Southern European Task Force), and a heavy battalion in Europe (from either the 1st Infantry or 1st Armored Division). Currently, most of those rapid-reaction forces are deployed to Iraq.

Table 4.
Effects of Eliminating the Requirement for Army Rapid-Reaction Forces

	Changes Relative to Base Case
Combat Brigades in Iraq	+1 to 1⅓
Combat Brigades Available for Other Missions	-2⅓ to -2⅔
Total Military Personnel in Iraq	+10,000 to 12,000
Reserve-Component Personnel Mobilized	+6,000 to 7,000
Annual Cost (Billions of 2004 dollars)	+1.7 to 2.0

Source: Congressional Budget Office.

If the Army did not maintain a dedicated pool of units for rapid reaction, it would be able to increase the size of the occupation that could be sustained in Iraq over the long term by 10,000 to 12,000 military personnel—equivalent to another 1 to 1⅓ combat brigades. The incremental cost of maintaining those additional troops in Iraq would total about $2 billion annually. This option would also increase the average number of reserve personnel that would need to be mobilized by 6,000 to 7,000 (see Table 4).[18]

If the requirement for Army rapid-reaction forces was eliminated, DoD would have less ability to respond to new contingencies. The Army would no longer have available a reserved pool of units at the highest levels of training and readiness; in addition, the number of combat brigades available for other missions would decline by between 2⅓ and 2⅔.

If a contingency required a rapid response, DoD could use other Army units, but they would probably be less well prepared for immediate deployment (because of unit reconstitution, training cycles, or other factors). DoD could also respond to

18. None of the rapid-reaction brigades affected by this option are in the reserve component, but some additional reserve units would have to be mobilized to support those brigades when they were deployed and to provide backfill.

Table 5.
Effects of Employing Army National Guard Brigades

	Changes Relative to Base Case
Combat Brigades in Iraq	+1⅔ to 2⅓
Combat Brigades Available for Other Missions	No Change
Total Military Personnel in Iraq	+8,000 to 11,000
Reserve-Component Personnel Mobilized	+11,000 to 13,000
Annual Cost (Billions of 2004 dollars)	+1.9 to 2.2

Source: Congressional Budget Office.

contingencies with units from the other services, although that might prove difficult or inappropriate in some cases.

Employ Army National Guard Brigades. In this option, the Army would draw on the combat divisions and separate brigades of the National Guard for occupation duty in Iraq. The National Guard—which contains about 36 brigade combat teams—currently has responsibility for peacekeeping in Bosnia and the Sinai Peninsula. The Army plans to move responsibility for peacekeeping operations in Kosovo to the National Guard as well.

The Secretary of Defense recently stated that DoD is considering a goal of mobilizing reserve units no more than one year out of every six. If the Army employed all National Guard combat brigades in the occupation of Iraq at that level of frequency, it could increase the size of the sustainable occupation force by 8,000 to 11,000 military personnel, equivalent to 1⅔ to 2⅓ combat brigades. Maintaining those extra troops in Iraq would cost an additional $2 billion per year, CBO estimates. It would also require raising the average number of reserve personnel mobilized by 11,000 to 13,000 (see Table 5).

Although CBO's analysis limited levels of reserve mobilization to one in six (about 17 percent), higher levels are possible. For example, the Army National Guard could provide as many extra brigades in Iraq as two additional active divi-

Table 6.
Effects of Employing Army Special-Forces Units

	Changes Relative to Base Case
Combat Brigades in Iraq	No Change
Combat Brigades Available for Other Missions	No Change
Total Military Personnel in Iraq	+2,000 to 3,000
Reserve-Component Personnel Mobilized	+1,000
Annual Cost (Billions of 2004 dollars)	+0.3 to 0.4

Source: Congressional Budget Office.

sions, but doing that would require increasing mobilization levels for those brigades to about 24 percent (or one year out of every four).

Employ Army Special Forces. In this option, the Army would draw on the special-forces (SF) groups in its active and reserve components for occupation duty in Iraq. The Army maintains five active SF groups (plus some additional formations, such at the 75th Ranger Regiment) and two reserve SF groups. Those units are well equipped for some of the duties associated with occupation and rebuilding—for example, they are trained to assist other countries in establishing indigenous military forces.

If the Army employed SF groups as a regular part of the occupation force in and around Iraq, it would increase the size of the occupation that could be sustained by 2,000 to 3,000 military personnel. CBO estimates that the incremental cost of maintaining those forces would total $400 million per year. This option would also increase the average number of reserve personnel mobilized by about 1,000 (see Table 6).[19]

19. The additional reserve personnel mobilized under this option are associated with two reserve-component SF groups, as well as a small requirement for backfill.

Although using SF groups would have a relatively small effect on personnel levels compared with the other options that CBO analyzed, the effect of employing special forces could be disproportionate to their numbers because of those forces' unique skills.

If the Army used SF groups in the occupation of Iraq, however, DoD's capability to respond to other contingencies or operational demands would be reduced. The unique set of skills associated with SF units makes them useful for a wide array of military operations, including some for which they might be the only feasible choice. If Army SF groups were fully occupied with the mission in Iraq, DoD would either have to rely more heavily on SF units from the other services or accept that the available Army SF groups could be less well prepared than would otherwise be the case (because of unit reconstitution, training cycles, or other factors).

Employ Active Marine Corps Regiments. In this option, the Marine Corps would assist the Army in the long-term occupation of Iraq by rotating major combat formations through that country in a manner similar to the Army's rotation system. The Marine Corps has been used for occupation duty several times in U.S. history (such as in Haiti, Nicaragua, and the Dominican Republic during the 1920s and 1930s), but over the past decade, DoD has chosen to employ the Army for most peacekeeping operations. However, the equipment and training of Marine Corps units do not preclude their use for occupation duty. In addition, for this option, CBO assumed that the Army would need to provide some support units for Marine units.

If the Marine Corps contributed all of its forces not committed to Okinawa or amphibious readiness groups (ARGs) to the occupation of Iraq, the size of the occupation that could be sustained would rise by 6,000 to 12,000 military personnel, CBO estimates—equivalent to ⅓ to 1 combat brigade. Maintaining those Marine Corps units in Iraq is estimated to cost an additional $1 billion to $2 billion a year. It would also increase the average number of reserve personnel mobilized by 3,000 to 5,000 (see Table 7).[20]

If the Marine Corps took part in the occupation of Iraq, DoD would have less capability to respond rapidly to new contingencies. Marine ARGs, in connection with the Maritime Prepositioning Force, were used to provide a rapid buildup of combat power in Operation Desert Shield and before Operation Iraqi Freedom; they could be expected to play that role in the future. If all Marine regiments were either deployed, recovering after deployments, or preparing for deployments

20. This option would employ only regiments and MEBs from the Marine Corps's active component, but some additional Army reserve-component units would have to be mobilized to support those regiments when they were deployed.

Table 7.
Effects of Employing Active Marine Corps Regiments

	Changes Relative to Base Case
Combat Brigades in Iraq	+⅓ to 1
Combat Brigades Available for Other Missions	-1⅔ to -1
Total Military Personnel in Iraq	+6,000 to 12,000
Reserve-Component Personnel Mobilized	+3,000 to 5,000
Annual Cost (Billions of 2004 dollars)	+1.0 to 1.9

Source: Congressional Budget Office.

(either in Iraq, Okinawa, or as part of ARGs), DoD's ability to quickly deploy substantial combat power in the early phases of an operation would be degraded. In addition, the number of combat brigades available for other missions would decline by between 1 and 1⅔.

Employ Marine Corps Reserve Regiments. In this option, the Marine Corps would draw on three reserve infantry regiments and other elements of the Marine Corps Reserve for use in the occupation of Iraq. That change would increase DoD's ability to sustain an occupation over the long term by 4,000 to 5,000 military personnel, equivalent to about one-third of a combat brigade. CBO estimates that the incremental cost of maintaining those additional occupation forces would total about $1 billion annually. This option would also raise the average number of reserve personnel mobilized by about 5,000 (see Table 8).

Options to Expand the Occupation Force Beyond the Base Case by Increasing the Army's Force Structure

If the United States needed to maintain a larger occupation force in Iraq over the long term than those described above, it could create additional military units. CBO analyzed the effects of two possible plans to increase the number of Army combat divisions and support units. Those plans could be employed in combination with any of the options discussed above. Unlike the previous options, however, creating new units would take several years to accomplish and thus would

Table 8.
Effects of Employing Marine Corps Reserve Regiments

	Changes Relative to Base Case
Combat Brigades in Iraq	+⅓
Combat Brigades Available for Other Missions	No Change
Total Military Personnel in Iraq	+4,000 to 5,000
Reserve-Component Personnel Mobilized	+5,000
Annual Cost (Billions of 2004 dollars)	+0.9

Source: Congressional Budget Office.

not assist in the occupation of Iraq as soon as the other options included in this analysis would.

Increase the Army's End Strength. In this option, the active Army would grow by 80,000 personnel—enough, CBO estimates, to provide the service with another heavy division, one more light division, and 19,000 additional support personnel.[21] CBO assumed that the additional support units created would be largely military police, civil affairs, and psychological-operations units. Those types of support personnel have been in high demand in peacekeeping operations over the past decade and are concentrated in the Army's reserve component. Thus, creating additional active units of those types could reduce the levels of mobilization and deployment needed for reserve personnel.

If the Army's end strength (the level at which DoD is authorized to recruit and maintain the service) was expanded by 80,000 personnel, the size of the occupation that could be sustained in Iraq over the long term would increase by 18,000 to 23,000 military personnel—equivalent to another 1⅔ to 2 combat brigades. Excluding the costs of creating the new divisions and paying for their peacetime operation and support (which are discussed below), using those personnel in the

21. Of that total increase of 80,000 personnel, 30,000 positions would be reserved for students, trainees, and administrative overhead (including drill instructors, base garrisons, and so forth) to support the new units.

Table 9.
Effects of Increasing the Army's End Strength by 80,000

	Changes Relative to Base Case
Combat Brigades in Iraq	+1⅔ to 2
Combat Brigades Available for Other Missions	+3 to +2⅓
Total Military Personnel in Iraq	+18,000 to 23,000
Reserve-Component Personnel Mobilized	+10,000 to 11,000
Cost (Billions of 2004 dollars)	
Annual	
Occupation related	+3.1 to 3.6
To maintain new forces	+6.4
Up front	+18.0 to 19.4[a]

Source: Congressional Budget Office.

a. This estimate assumes that the divisions would be equipped entirely with new, modern equipment. If surplus equipment was available for those units, costs would be lower, perhaps significantly so.

occupation would cost an additional $3 billion to almost $4 billion annually, CBO estimates. This option would also increase the average number of reserve personnel mobilized by about 10,000 to 11,000 (see Table 9).[22] Table D-2 in Appendix D displays the effect that creating two new divisions and employing them (in addition to all existing forces) for occupation duty in Iraq would have on the number of brigades that would be immediately available for other missions.

Increasing the size of the Army would take time to accomplish—personnel would have to be recruited and trained and equipment would need to be purchased. CBO estimates that the first new division would be available after about three years and the second after about five years.

22. This option would not create reserve-component units, but some additional existing reserve units would have to be mobilized to support the new active combat brigades when they were deployed as well as to provide backfill.

CBO estimates that creating the two divisions would cost up to $18 billion to $19 billion for equipment purchases, construction, and other nonrecurring expenses and more than $6 billion per year for operation and support. The up-front costs to buy new equipment and construct required facilities are uncertain, however. CBO examined equipment lists for current units and estimated the costs of purchasing all of that equipment new. However, costs could be lower if the Army used existing stocks of surplus equipment. To estimate construction costs, CBO looked at data from recent brigade-level construction projects and multiplied those costs by the number of equivalent brigades that would be created under this option. The actual costs of constructing infrastructure for the new units would depend on the degree to which existing surplus property and facilities could be utilized.

Convert Army Overhead Positions from Military Personnel to Civilians. Some of the Army's active-duty personnel are used to provide administrative and support functions and are thus not immediately deployable. Many of the functions that those personnel perform could be carried out by civilians, and the military personnel thus freed up could be assigned to deployable combat and support units. CBO reviewed DoD's 2001 inventory of positions and concluded that (excluding some inherently military support functions) about 32,000 to 65,000 Army active-duty positions could be converted to civilian positions. If that happened, costs would increase because the civilians who were hired to replace military personnel would be an addition to the Army's workforce. CBO estimates that the civilian replacements could be phased in over two to three years. After that, CBO estimates, the civilian replacements would cost about $1 billion to $2 billion a year, depending on the total number of active-duty positions converted.[23]

The range for the number of positions that could be converted under this option comes from using relatively more restrictive or less restrictive criteria about whether military positions could be filled by civilians. At the lower end of the range, this option would free up enough personnel to create one additional light division and supporting units. At the higher end, it would free up sufficient personnel to create a light division, a heavy division, and supporting units (the same as in the option above to increase the Army's end strength).[24]

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23. That estimate assumes that seven civilians would replace every 10 military personnel. That ratio is consistent with DoD's experience in outsourcing competitions. CBO assumed that in this case, the new civilians would be organized in the most efficient manner, similar to what would occur in an outsourcing competition.

24. Although the 65,000 personnel positions that would be freed up by this option are less than the 80,000 associated with the previous option, these positions would be sufficient to create almost the same mix of units because additional civilians—rather than military personnel—would be hired to perform administrative functions.

Table 10.
Effects of Converting 32,000 Army Positions to Civilian Positions

	Changes Relative to Base Case
Combat Brigades in Iraq	+⅔ to 1
Combat Brigades Available for Other Missions	+1⅔ to 1
Total Military Personnel in Iraq	+9,000 to 11,000
Reserve-Component Personnel Mobilized	+5,000
Cost (Billions of 2004 dollars)	
Annual	
Occupation related	+1.5 to 1.7
To pay civilians and maintain new forces	+1.6
Up front	+5.5 to 6.1[a]

Source: Congressional Budget Office.

a. This estimate assumes that the divisions would be equipped entirely with new, modern equipment. If surplus equipment was available for those units, costs would be lower, perhaps significantly so.

Costs for new equipment and construction were estimated in a manner similar to that for the option above. Although the Army's end strength would not grow under this option, creating additional combat units would entail costs for new equipment and infrastructure as well as the added operation and maintenance costs associated with combat units.

Convert 32,000 Army Positions to Civilian Positions. Using relatively restrictive criteria for how many jobs could be converted would let the Army create one new light division and some extra support units. That would be enough units to raise the size of the occupation that could be sustained in Iraq by 9,000 to 11,000 military personnel—equivalent to ⅔ to 1 combat brigade (see Table 10). This option would also boost the average number of reserve personnel mobilized by about

5,000.[25] However, the new division would not be available until after about three years.

Adding those troops would raise the cost of the occupation by almost $2 billion a year. In addition, creating the new division would require up to $6 billion for the purchase of new equipment and other up-front costs, CBO estimates (less if existing stocks of equipment were used to equip the division). The new division would also cost an additional $500 million annually for peacetime operation and maintenance. Finally, the added cost to hire civilians would be about $1 billion a year.

Convert 65,000 Army Positions to Civilian Positions. Using less-restrictive criteria for how many positions could be converted would allow the Army to create one new light division, one new heavy division, and more support units. Those additions would be sufficient to boost the size of the sustainable occupation force in Iraq by 18,000 to 23,000 military personnel—equivalent to 1⅔ to 2 combat brigades (see Table 11). This option would also increase the average number of reserve personnel mobilized by about 10,000 to 11,000.[26] The first new division would not be available for about three years, however, and the second would not be ready until after about five years.

Those additional troops would raise the cost of the occupation by between $3 billion and $4 billion per year, CBO estimates. In addition, creating the two divisions would require up to $15 billion to $16 billion for new equipment and other nonrecurring costs (again, less if existing equipment was used for the divisions). The new divisions would also cost an extra $1 billion per year for peacetime operation and maintenance costs, and hiring additional civilians would cost about $2 billion annually.

Convert Navy and Air Force Overhead Positions from Military Personnel to Civilians. The Secretary of Defense has stated that about 320,000 military personnel perform functions that might be carried out by civilians. Besides Army personnel, that total includes members of the Navy and Air Force. CBO's review of DoD's 2001 inventory of positions suggests that between 52,000 and 103,000 active-duty Navy and Air Force military positions involve functions that could be performed by civilians. In principle, those positions could be transferred to the Army and used to create new units. The number of positions that would be converted under this option would depend on the criteria used to determine which

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25. This option would not create reserve-component units, but some additional existing reserve units would have to be mobilized to support the combat troops when they were deployed as well as to provide backfill.

26. As with the previous two options, this one would not create reserve-component units, but some additional existing reserve units would have to be mobilized to support the combat troops when they were deployed as well as to provide backfill.

Table 11.
Effects of Converting 65,000 Army Positions to Civilian Positions

	Changes Relative to Base Case
Combat Brigades in Iraq	+1⅔ to 2
Combat Brigades Available for Other Missions	+3 to +2⅓
Total Military Personnel in Iraq	+18,000 to 23,000
Reserve-Component Personnel Mobilized	+10,000 to 11,000
Cost (Billions of 2004 dollars)	
Annual	
Occupation related	+3.1 to 3.6
To pay civilians and maintain new forces	+3.3
Up front	+15.1 to 16.3[a]

Source: Congressional Budget Office.

a. This estimate assumes that the divisions would be equipped entirely with new, modern equipment. If surplus equipment was available for those units, costs would be lower, perhaps significantly so.

jobs could be performed by civilians. At the lower end of the range, those conversions would free up enough personnel to create another division. At the higher end, they would free up sufficient personnel to create more than two additional divisions. Whether DoD would choose to transfer military positions between the services to support an occupation is highly uncertain, however. Therefore, CBO has not estimated the costs of implementing those conversions or the schedule on which they might be accomplished.

The Effects of Changing Key Assumptions

CBO also analyzed the effects of changing its assumptions about the continuation of other U.S. military commitments and the rotation ratios that would be sustainable over the long term. CBO compared the effects of those changes with the case in which all existing forces were used to sustain an occupation in Iraq.

Reduce Other U.S. Commitments. DoD could free up additional units for rotation to Iraq by withdrawing Army forces from the Sinai Peninsula, Bosnia, and Kosovo and Marine Corps infantry regiments from Okinawa. Although eliminating those troop commitments could have significant diplomatic and political consequences, it would increase the size of the occupation force that could be sustained in Iraq by another 12,000 to 13,000 military personnel—equivalent to 2⅔ brigades. Overall levels of reserve-component mobilization would not change appreciably, since reserve personnel who would have been deployed to Bosnia, Kosovo, or the Sinai Peninsula would still be mobilized but deployed to Iraq instead. Likewise, this action would probably not result in substantial incremental costs, because the savings that would accrue from withdrawing forces from those other commitments would largely offset the costs of sustaining additional forces in Iraq.

Reduce Deployment Tempo. CBO's analysis assumes that rotation ratios of between 3.2:1 and 4:1 would be feasible over the long term for active-component units (as explained in Appendix C). If, instead, the Army and Marine Corps maintained a more limited level of deployment—say, a 5:1 rotation ratio—for units deployed to Iraq, most risk-averse observers would be unlikely to conclude that the occupation was having substantial adverse effects on the training and readiness of Army and Marine Corps units. At that deployment level, assuming the use of all existing forces, the size of the occupation force that could be sustained in Iraq would drop to 49,000 military personnel—equivalent to 5 brigades. The number of reserve personnel mobilized would average 43,000, and the number of combat brigades immediately available for other missions would total 23⅔.

Increase Deployment Tempo. Alternatively, the Army and Marine Corps could raise the deployment tempo for active-component units and personnel to high levels. A rotation ratio of, say, 1.3:1 would increase time away from home for active deployable units to levels higher than the all-volunteer force has ever experienced.[27] In that case, if all existing forces were used, the size of the occupation force that could be sustained in Iraq would rise to 283,000 military personnel—equivalent to 27⅔ brigades. The number of reserve personnel mobilized would average 158,000. (That level of mobilization would be necessary to fully support such a large force, but it would exceed the 17 percent mobilization level that CBO assumed elsewhere for reserve personnel.) Such high levels of deployment tempo would mean that no units would be immediately available to deal with other contingencies because all units would be either deployed or recovering after a deployment.

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27. At that level of deployment, personnel would have 30 days of leave per year and would spend the rest of the time with their units in training or deployed to occupation duty or other commitments.

Using Financial Incentives and Volunteers to Help Sustain an Occupation

The greatest demand for occupation forces in Iraq may occur over the next one to three years as U.S. involvement in efforts to achieve economic and political stability remain substantial but Iraqi personnel are still being trained to take over policing functions. If that proves to be the case, efforts to create new Army divisions might not provide a timely response to that demand. Nonetheless, depending on the size of the force needed, meeting occupation requirements by making current reserve and active personnel increase their deployment tempo might threaten morale and the future retention of high-quality forces.

Regardless of whether DoD's personnel needs over the next three years exceed the numbers that CBO estimates can be maintained at sustainable deployment tempos, DoD could seek the authority to use temporary financial incentives to increase the number of personnel that could be sent to Iraq. Such incentives could encourage current selected-reserve and active-duty personnel to voluntarily accept a higher deployment tempo or induce new categories of reserve personnel or prior service members to volunteer for deployment.

DoD already uses financial incentives—including sea pay and assignment pay in the Navy and stationing pay in the Army—to encourage people to voluntarily extend tours in undesirable locations or to take assignments that they might otherwise consider a hardship. In the case of the Navy, assignment to some billets is determined through an on-line auction in which members specify the minimum payment they would require to accept the post. Large financial incentives are not unheard of in the military. For example, the Congress has authorized DoD to pay reenlistment bonuses of up to $60,000 for service members in hard-to-fill specialties.

DoD does not have experience using bonuses to encourage military personnel to deploy voluntarily to a hostile area, however. Thus, the effects of offering such financial incentives are unknown, as is the extent to which they could serve as a substitute for forced increases to deployment tempos or permanent increases in the size of the military to meet potential needs for the occupation of Iraq.

Offer Bonuses for Extended or More-Frequent Deployments

In order to provide more personnel for occupation duty during the next one to three years without causing undue hardship on some military personnel, active or selected reserve personnel who had already been deployed to Iraq and would not be scheduled for an additional deployment soon might be paid a bonus to voluntarily extend their tours or to take an additional tour. Such a bonus could encourage some individuals to accept more frequent deployments voluntarily, which could, in turn, alleviate the stress that increasing deployment tempo would have

for some military personnel, particularly for those with family or civilian employment demands.

Seek Volunteers for Temporary Constabulary Units

As demands on reservists have increased, manpower analysts have begun discussing the possibility of a continuum of reserve service. At one end would be units that rarely deployed, and at the other end would be units that contained only people who were willing to accept a much higher frequency of deployment. Even though the typical reserve ground unit might deploy no more than once in six years, some service members would be willing to volunteer for units that had a much higher deployment rate.

Introducing a continuum of service throughout the reserve force structure could take some time, but the concept might be applied immediately to newly created but temporary reserve constabulary units. Such units could be filled with volunteers who were current members of the selected reserve, members of the Individual Ready Reserve (IRR) who recently left active or reserve duty and have a service obligation remaining, recent military retirees, and former service members who no longer had a service obligation but had left active duty less than two years ago. Members of the new constabulary units would be paid a "signing" bonus. The units could be called to active duty, train for six months to become proficient in specific constabulary duties, deploy to Iraq for one year, and then disband. Thus, this approach might provide additional personnel suitable for occupation duty in Iraq much sooner than creating new Army combat divisions would.

The personnel pool from which such units could draw is large. There are currently more than 176,000 Individual Ready Reservists with Army or Marine Corps training. That number does not include recent retirees or others who left active duty after completing their minimum service obligation. Although the President has the authority to call up IRR members involuntarily, and the service Secretaries have the authority to call up retirees involuntary, a voluntary approach that relied on bonuses would allow DoD to tap those pools of pretrained personnel without making enlistment in regular reserve or active units appear less attractive. However, that voluntary approach would require Congressional authorization to be implemented.

Appendix A:
Differences Between CBO's Current and September 2002 Estimates for an Iraq Occupation

Last September, the Congressional Budget Office estimated that an occupation of Iraq involving a force of 75,000 to 200,000 U.S. military personnel would cost a total of between $1.4 billion and $3.9 billion a month (in 2004 dollars)—or about $17 billion to $47 billion per year—above the military's regular day-to-day operating costs. That estimate resulted from a top-level estimating methodology based primarily on data from operations in the Balkans.

For this analysis, CBO has revised its methodology for estimating occupation costs to provide a more detailed approach. The options examined in this analysis require a methodology that is sensitive to the effects of changes in deployment schedules and the numbers of National Guard and Reserve personnel called to active duty to support the occupation. Using its revised methodology, CBO estimates that the costs of a long-term occupation of Iraq involving a force of 67,000 to 106,000 personnel (levels that assume the use of all options involving existing forces) would total about $14 billion to $19 billion a year. That revised methodology yields estimates that are about 10 percent to 25 percent lower on a per-person basis than the estimates published in September 2002 (see Table A-1).

Several factors account for most of the difference between the two sets of estimates. The principal factor is the number of reservists included in the estimates. For instance, under the 200,000-person force level assumed in CBO's September 2002 estimate, reservists accounted for 60 percent of deployed personnel, whereas they make up between 40 percent and 43 percent of the occupation force considered in the current analysis. That difference is significant because the incremental cost of deploying reservists is higher on a per-person basis than the cost of deploying active-component personnel—50 percent to 85 percent higher depending on assumptions about unit rotation schedules. Estimating annual costs for a 200,000-person occupation force (of 120,000 reservists and 80,000 active-component personnel) using the revised methodology developed for this analysis yields a figure of $36 billion to $41 billion (depending on assumptions about unit rotation schedules). Those numbers are about 25 percent to 10 percent lower than the upper-bound estimate from September 2002 ($47 billion in 2004 dollars). Any remaining differences in cost can be attributed to the revised estimating methodology, as mentioned above.

The estimates of the costs of occupation are uncertain. If information about actual costs experienced to date in Iraq was available, CBO would use actual costs to estimate the costs of a continuing occupation. However, CBO has no supporting data from DoD that allow it to do so at this time. DoD officials recently stated

Table A-1.
Comparison of CBO Cost Estimates for Various Occupation Forces in Iraq

	September 2002		September 2003 (Using All Existing Forces)	
	Lower Bound	Upper Bound	Lower Bound	Upper Bound
Personnel in Occupation Force				
Active component	60,000	80,000	38,000	64,000
Reserve component[a]	15,000	120,000	29,000	42,000
Total	75,000	200,000	67,000	106,000
Deployed Reservists as a Percentage of Total Personnel	20	60	43	40
Rotation Schedule (Months)	n.a	n.a	6[b]	12
Total Cost (Billions of 2004 dollars)				
Annual	16.8	46.8	13.9	19.0
Monthly	1.4	3.9	1.2	1.6
Monthly Cost per Person (2004 dollars)	18,700	19,500	17,200[b,c]	14,900[c]

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. The actual number of reservists mobilized would be larger than the number of reservists deployed to Iraq, because of the need to provide backfill and the requirement to train reserve-component units before deployment.

b. Six-month deployments increase the monthly cost per person somewhat, since reserve-component units are assumed to require a three-month training phase when mobilized. With shorter tours for those units, proportionately more reservists would be mobilized for that training phase.

c. Per-person costs include the incremental cost of maintaining a soldier or Marine in Iraq, as well as the cost for training reservists and providing backfill for deployed active-component personnel.

that occupation costs for Iraq total about $3.9 billion a month. But based on a review of DoD data for the costs of the war on terrorism in 2002, CBO believes that the $3.9 billion figure may include some one-time costs that CBO would not incorporate in its estimate of the costs of long-term occupation. Thus, CBO is reluctant to use that top-level figure in this analysis.

Appendix B: Using Individual Rotation Rather Than Unit Rotation to Sustain an Occupation

Another way to support operations in Iraq besides the policy of unit rotation considered in this analysis would be to rotate individuals, rather than units, through the theater. The Army currently uses that method to maintain about 28,000 soldiers in South Korea, where the 2nd Infantry Division and two of its combat brigades are based. Those and other associated units remain in Korea while personnel rotate through them on one-year tours. A similar scheme was used to support forces during the Vietnam War and could be used in Iraq.

The size of the occupation force that could be sustained using individual rotations to units stationed in Iraq—assuming equivalent time away from home—would be roughly the same as the size of the force that could be sustained by rotating units. The reason is that the size of the pool from which individuals would be drawn to serve tours in Iraq is about the same size as the pool of people in units that could be called on to support unit rotations.[1] Furthermore, in the long run, the time that soldiers would spend away from their families would be roughly equal under either rotation scheme (given the same size occupation), although the nature of the separation would differ. In the case of individual rotations, a soldier would spend a one-year unaccompanied tour in Iraq, compared with a six-month or one-year deployment from home station in the case of unit rotations.

The individual-replacement approach has advantages and disadvantages. The primary advantage is that entire units would not have to be displaced from their home stations in the United States or Europe and dispatched, perhaps with their equipment, to Iraq for a period of six months or a year. Moreover, the need for a rotation base—with units preparing for or recovering from deployment while others were deployed—would be avoided. That would mean that more combat brigades should be available to respond to other contingencies. Another benefit would be avoiding the turbulence associated with assembling units to deploy to Iraq under a unit-rotation scheme. Peacetime rules can make a significant share —30 percent to 40 percent—of the personnel in the Army's deployable units un-

1. The characteristics of the two pools would differ. All soldiers completing school or training would be eligible for assignment to a tour in Iraq, as would soldiers assigned to both deployable and nondeployable units in the continental United States. (The Army's current practices generally preclude assigning personnel to back-to-back tours outside the continental United States.) Thus, the pool for individual rotations would include 310,000 to 330,000 personnel for a force in Iraq of 25,000 to 43,000 (the number of active-component personnel in the base case). Those numbers compare with the approximately 305,000 soldiers assigned worldwide to deployable units that would form the pool for supporting unit rotations.

available for deployment overseas at any given time.[2] The Army uses a process called cross-leveling to swap soldiers between units in order to fill up a deploying unit with soldiers who are eligible to deploy. Using an individual-rotation system would avoid that process by tapping only those people who were eligible to spend a year overseas for tours in Iraq.

However, a system of rotating individuals through Iraq, in a manner similar to that used in Korea, would have disadvantages. The foremost would be the greater personnel turnover experienced by units, both in Iraq and in the United States. Units that are rotated through Iraq retain essentially the same personnel throughout the duration of the rotation.[3] In contrast, if individuals rotate on one-year tours through units that are stationed in Iraq for the duration of the occupation, the entire complement of personnel in each unit will change every year—that is, units in Iraq will experience 100 percent annual turnover in personnel.

In addition, units based in the continental United States, both deployable and nondeployable, would see an increase in the turnover of personnel assigned to them. For the most part, current Army policy precludes soldiers from being assigned to another tour outside the continental United States (OCONUS) just after they have completed an OCONUS tour. For example, after a tour in Europe or Korea, a soldier's next tour will be in the continental United States (CONUS). Tours are generally of fixed length—three years in Europe and one year in Korea—and when soldiers finish their OCONUS tours, they are replaced by soldiers currently serving tours in CONUS or by soldiers who have just finished their schooling or training. Thus, soldiers who are in school, in training, or serving tours in CONUS form the pool of replacements for soldiers finishing their tours overseas.

The length of tours in CONUS is generally not fixed but rather is determined by the demand for replacements for soldiers finishing overseas tours.[4] Judging from the configuration of forces stationed overseas at the end of fiscal year 2002, CBO concludes that the average CONUS tour length for enlisted personnel was 2.6

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2. Those soldiers are either preparing to move, coming to the end of their term of service, or have just returned from unaccompanied tours or deployments. See Bruce Orvis, *Deployability in Peacetime* (Santa Monica, Calif.: RAND, 2002), p. 11.

3. Some soldiers will need to be replaced during a rotation because of injury or illness or other reasons. Therefore, even with a unit-rotation scheme, units will experience some personnel turnover during the rotation.

4. An exception to that rule is tours for soldiers in specific jobs, such as recruiting and drill sergeants. Those tours are of fixed length—typically two or three years long.

years.[5] If a large number of soldiers were stationed in Iraq on one-year tours, the demand for replacements from CONUS would increase, and at the same time, the size of the pool providing replacements would decrease (if all other requirements—in Europe, for example—remained the same). If 25,000 to 43,000 active Army forces (the number of active-component personnel in the base case) were stationed in Iraq on one-year tours, the average length of CONUS-based tours could shrink to between 1.8 years and 2.2 years. In addition, average annual turnover for enlisted personnel would increase from the 38 percent associated with the current tour length of 2.6 years to a range of 46 percent to 54 percent. Those levels of turbulence—both in the occupying forces and in units in CONUS—have led some defense analysts and Army officers to criticize the idea of using individual rotations to support operations overseas.

As discussed above, the total amount of time that the average soldier would spend in Iraq over the long term would not differ between the individual- and unit-rotation schemes. In one case, soldiers would spend one-year tours in Iraq; in the other case, six-month or one-year tours deployed there with their units. Under an individual-rotation scheme, however, the average time that an enlisted soldier spent in a tour in the continental United States would be five to 10 months shorter, and average annual turnover of enlisted personnel in CONUS units would rise by several percentage points.[6] Some analysts have questioned the current level of turnover and would argue that any increase would be detrimental to units' cohesion and ability to perform in combat.

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5. A RAND analysis published in 1998 and based on the disposition of forces at the end of fiscal year 1997 arrived at the same average length for CONUS tours. See W. Michael Hix and others, *Personnel Turbulence: The Policy Determinants of Permanent Change of Station Moves* (Santa Monica, Calif.: RAND, 1998).

6. Although soldiers would have longer CONUS tours with unit rotations, some soldiers assigned to deployable units would spend part of their tour deployed overseas. Over the long run, however, the total time that an average soldier spent in Iraq would be the same under either scheme.

Appendix C:
Deployment Tempo and Rotation Ratios

This appendix examines the factors that are likely to limit the amount of time that both active- and reserve-component personnel can be deployed to operations overseas. Those factors underlie the rotation ratios that CBO derived for use in its analysis.

Rotation Ratios for Active-Component Forces

Until the mid-1990s, Army units and personnel were not subject to repeated and long deployments on a continuing basis. In contrast, the Marines Corps routinely maintained about 25 percent of its infantry battalions at sea or on Okinawa. During the late 1990s, when the Army maintained 5 percent of its deployable force in operations overseas, some defense analysts and Army officials raised concerns about the effect of those deployments on readiness and troop morale.

The level of forces that can be sustained overseas will depend on how much of the Army or Marine Corps is deployable and how much time, on average, those forces can spend overseas and still maintain sufficient levels of training and an acceptable quality of life for soldiers and Marines. If deployment duty to overseas operations is shared equally among all active-component personnel who can be deployed, the average amount of time in a given year that an individual soldier or Marine assigned to a deployable unit spends deployed will be roughly proportional to the amount of the force deployed. In the late 1990s, the 5 percent of deployable forces that Army maintained overseas meant that the average soldier in a deployable unit spent about 20 days per year deployed to overseas operations.

Under current practices, not all of the Army is immediately available for deployment. About 110,000 personnel are assigned to duties—such as recruiting—that are not associated with units available to deploy.[1] At any given time, another 68,000 or so Army personnel are not available to deploy because they are in training, in school, in transit between assignments or are sick. That leaves about 300,000 active-component Army personnel who are assigned to units, such as armor battalions or military police companies, that can be sent to operations overseas. It is from that pool of 300,000 that active-component Army forces for operations in Bosnia, Kosovo, Afghanistan, and Iraq are drawn.

The level of overseas operations that the United States can sustain with a given force will be determined by the deployment tempo (or time away from home station) that is deemed acceptable and not too taxing on military personnel. As men-

1. An enlisted soldier may typically spend two or three years in a nondeployable assignment (such as recruiting) and then move to an assignment in a deployable unit.

tioned above, the levels of deployment that the Army experienced in the late 1990s, which resulted in an average of 20 days per year deployed to operations, were deemed by some observers to be too taxing.[2] (Those 20 days deployed to operations were in addition to more than 60 days spent away from home each year for training and joint exercises.) The appropriate deployment tempo—and therefore the required rotation ratio—is a matter of policy judgment. One benchmark, however, was set by the Congress in the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65), which established a program that would pay military personnel from any service a bonus of $100 for each day of deployment above a given threshold. Originally set at 250 days in a 365-day period, the threshold was later amended to 400 days in a 730-day period.[3] That level of deployment translates to an average deployment rate of 200 days per year, or 55 percent of the time (see Figure C-1).[4]

The Congress defined deployment days to include not only days spent overseas for operations such as Iraqi Freedom but also days spent away from home at training ranges and on joint exercises. A study by RAND found that soldiers in deployable units spent an average of 63 days per year away from home for training and at joint exercises in 2000.[5] (Marine Corps units also typically spend an average of about 60 days training per year.) That pace would leave a maximum of about 140 days per year, on average, below the Congressional threshold that military personnel could be deployed to operations.[6]

Assuming that all deployable units were equally likely to be sent to operations overseas, limiting deployed time to 140 days per year—or 38 percent of the time—would yield a cap of 38 percent on the share of deployable active-duty Army or Marine forces that could be deployed overseas for an extended period. Put another way, the ratio of total deployable forces to those that could be sustained overseas would be approximately 3:1 (see Table C-1).

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2. That level of deployment represents an average for the entire 300,000-person deployable force. Some types of soldiers, and soldiers in some types of deployable units, experienced much higher levels of deployment during the same period, and others experienced lower levels.

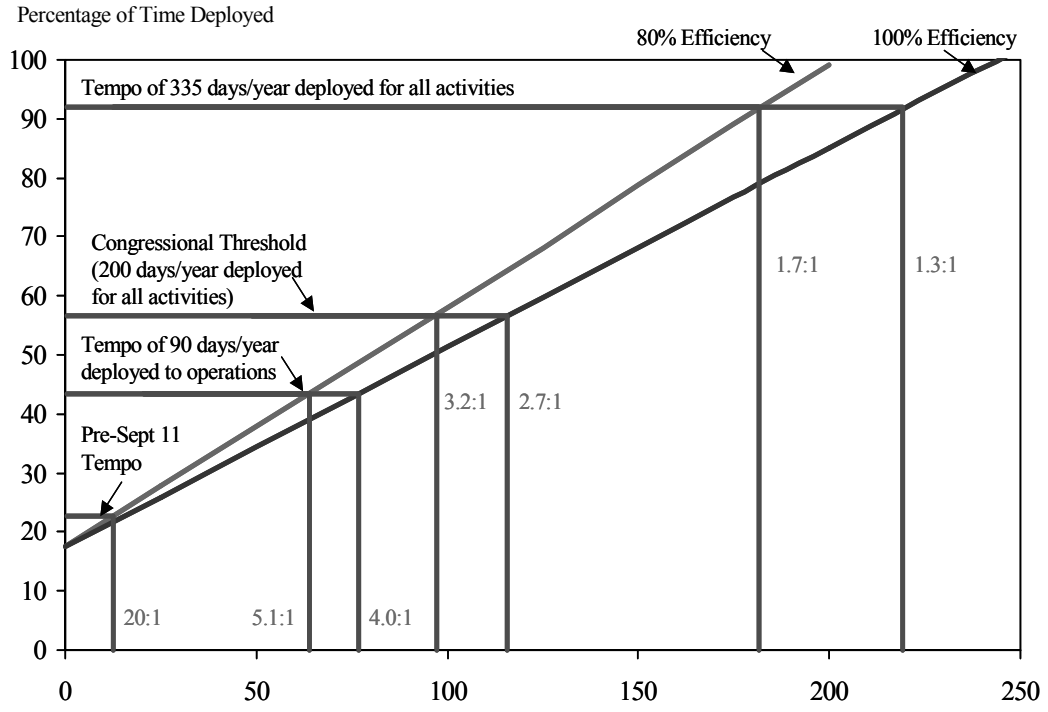
3. That change was enacted in the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2003 (P.L. 106-945).

4. DoD has been operating under a temporary waiver from that restriction since September 11, 2001.

5. Ronald E. Sortor and J. Michael Polich, *Deployments and Army Personnel Tempo* (Santa Monica, Calif.: RAND, 2001).

6. The deployment rates and ratios discussed in this analysis apply only to the 300,000 soldiers who are in deployable units. By definition, soldiers in other assignments do not deploy. If the total number of days deployed was averaged across the entire active-component Army of 480,000 personnel, the average deployment rate would be lower.

Figure C-1.
Average Share of Time That a Soldier in an Average Unit Would Spend Deployed Under Various Deployment Tempos



Source: Congressional Budget Office based on Ronald E. Sortor and J. Michael Polich, *Deployments and Army Personnel Tempo* (Santa Monica, Calif.: RAND, 2001) and on DoD data.

Note: The ratios shown in this figure are the rotation ratios implied by the various deployment tempos and efficiency levels.

If higher or lower deployment levels are deemed acceptable, then lower or higher rotation ratios, respectively (or rotation bases, as they are often called), will be required. For example, deployment levels that required soldiers or Marines to be away from home for all but 30 days of leave per year (335 days, or 92 percent of the time) would require a small rotation base: only slightly more than 1. However, such a high level of deployment—roughly equal to three-quarters of the deployable force, and much higher than the current level of active Army forces deployed worldwide—would be hard to sustain for a long period. Conversely, if the need for both individual and collective training, as well as preparation and recovery,

Table C-1.
Effects of Various Deployment Tempos on Rotation Ratios for Active-Component Units

Deployment Tempo	Rotation Ratio	
	At 80 Percent Efficiency	At 100 Percent Efficiency
335 Days per Year (For all activities)	1.7:1	1.3:1
Congressional Threshold (200 days per year for all activities)	3.2:1	2.7:1
90 Days per Year Deployed to Operations	5.1:1	4.0:1

Source: Congressional Budget Office.

limited the average amount of time spent deployed to operations to 90 days per year (or 42 percent of the time when training and exercises are included), a total of four soldiers or Marines in deployable units would be needed to support each service member deployed overseas.[7] That requirement could be further increased —to a ratio of 5:1—if 20 percent of the Army's or Marine Corps's deployable units were not available or not suitable to be used in overseas operations, or if other factors (such as transit time and time when incoming and outgoing units overlap) reduced the efficiency of the unit-rotation scheme to 80 percent rather than the 100 percent that CBO assumed in deriving the lower ratios (see Figure C-1 and Table C-1).[8] Further justification for higher rotation ratios comes from Army analysts, who argue that a ratio of 5:1 is necessary to give units enough

7. The authors of a recent RAND publication argue that reducing the time between six-month deployments below 18 months—or increasing the fraction of time spent deployed to more than 25 percent—would place considerable stress on units. See W. Michael Hix, J. Michael Polich, and Thomas P. Lippiatt, *Army Stationing and Rotation Policy* (Santa Monica, Calif.: RAND, 2003), pp. 30-31.

8. Indeed, the rates at which the levels of deployed soldiers were supported in the late 1990s suggest that 80 percent is more representative of the efficiency that the Army has demonstrated in the past—when 5 percent of the Army was deployed 6 percent of the time. See Sortor and Polich, *Deployments and Army Personnel Tempo*.

time to prepare, recover, and train for combat-related tasks without placing them and their personnel under undue stress.[9]

In summary, on the basis of this analysis, the Army or Marine Corps would need a deployable rotation base of active-component forces that ranged from slightly more than one to five times the size of the forces maintained overseas. Intermediate values of three and four, however, seem to fall within the range of rotation bases that can be expected to be feasible over the long run.

Rotation Ratios for Reserve-Component Forces

Soldiers in the reserve component do not expect to be used at the same high rate as active-component forces. Until recently, most individual units in the reserves could expect to be called up and deployed infrequently. During the mid- and late 1990s, DoD began to activate reserve-component units from all of the services and the Coast Guard more frequently, averaging about 12.6 million duty days per year (equivalent to an average of about 35,000 mobilized reservists).[10] Since September 11, 2001, the services have called on reservists with even greater frequency, raising the average number mobilized to about 50,000.[11] At the peak of mobilization for Operation Iraqi Freedom, about 225,000 reserve personnel were mobilized (that figure has since fallen to slightly less than 190,000).

The higher level of reserve mobilization in recent years has led DoD to reevaluate its policies for shaping and using the reserve components. As a result, the Secretary of Defense has called for a long-term policy that would limit call-ups of individual reserve units and personnel to a maximum of one year in every six, or 17 percent. Mobilizing a reserve unit, however, includes time not only for deployment overseas but also for forming and training the unit. Assuming that three months could be spent preparing a unit for deployment, a six-month rotation would require a total mobilization time of nine months. Limiting usage to 17 percent would mean one nine-month mobilization every 4.5 years and a deployment ratio—or rotation ratio—of 9:1 (see Table C-2). If reserve units were deployed for 12-month rotations with three-month preparation times, they could be deployed once every 7.5 years, yielding a rotation ratio of 7.5:1.

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9. Briefing by the Army's Rotation, Manning, and Mobilization Task Force, October 18, 2002.

10. Data limitations and changes to DoD's methodology make it difficult to calculate comparable levels of duty days or average levels of mobilization prior to 1996.

11. That increase of nearly 50 percent is not necessarily the best measure of the stress placed on the reserve component. Some reserve units have been mobilized nearly continuously since September 11, 2001, and thus are disproportionately affected by the greater frequency of call-ups. Moreover, some types of units were in high demand during earlier operations, such as those in Bosnia or Kosovo, and some individual units were called up repeatedly even before September 11, 2001.

Table C-2.
Effects of Various Deployment Tempos on Rotation Ratios for Reserve-Component Units

Length of Deployment	Length of Mobilization[a]	Deployment Interval	Rotation Ratio
6 months	9 months	4.5 years	9.0:1
12 months	15 months	7.5 years	7.5:1

Source: Congressional Budget Office.

a. Assumes three months for mobilization and training prior to deployment.

Appendix D:
The Effects of Deployments on Forces Available for Other Missions

If the occupation of Iraq was sustained over an extended period of time, the need could arise for the United States to engage in other operations besides those long-term commitments that CBO included in its analysis. Therefore, for each option in the analysis, including the base case, CBO assessed the effect that deploying forces to Iraq would have on the pool of ground forces immediately available to the Department of Defense for other operations, including a major war.

If sufficient time was available, and any new missions were considered urgent enough, DoD would be capable of using all of its available ground forces—active and reserve—should they be needed. With enough time, DoD could mobilize and train all reserve-component forces, withdraw forces from other commitments, and commit all active-component forces to a new mission.

If, by contrast, DoD needed to respond rapidly (within less than three months) to a new contingency, some ground forces would be unavailable to take part immediately. CBO's analysis assumed that forces engaged in ongoing commitments would not be immediately available to respond to any new contingency. CBO further assumed that forces that had just returned from a deployment would need to engage in a recovery and reconstitution cycle and would also not be immediately available. (That phase of the rotation cycle is when large numbers of personnel take leave and receive new assignments and when units receive large numbers of replacement personnel. Units typically experience significant disorganization during that phase.) Finally, CBO assumed that reserve-component combat units would also not be immediately available for other missions because of their need for a three-month training period after mobilization. All remaining brigades were assumed to be available for immediate response to any new contingency.

The forces that might be needed to deal with a major new contingency are uncertain. DoD's planning in the 1990s, under the two-major-theater-war strategy, assumed that 20 to 21 combat brigades would be required to prosecute a major theater war. But major combat operations in Operation Iraqi Freedom were conducted with about 12 U.S. and three British brigades (indicating that previous planning may have been pessimistic). However, smaller contingencies generally require lower levels of force (for example, many limited operations, such as evacuating noncombatants, can be conducted by a single Marine expeditionary unit from an amphibious ready group).

In CBO's base case (which assumes that the occupation of Iraq would be sustained over the long term with only combat brigades from the active Army, using

a policy of unit rotation, and that the Army and Marine Corps would continue to maintain all of their other commitments at the current levels), 18 to 23⅓ active-component Army and Marine combat brigades would be immediately available other missions (see Table D-1). Since CBO assumed that reserve-component units are never available immediately for other missions, those numbers do not reflect reserve units or the missions in Bosnia, Kosovo, and the Sinai Peninsula that are now being conducted—or will soon be conducted—by such units.

Commitments can vary in the effects they have on the number of forces available for other missions. The Army's rapid-reaction forces, for example, are intended to be held in reserve so they are available for any contingency. In addition, units engaged in deployments are unavailable, as are an equal number of units in the recovery phase of the unit-rotation cycle. The ranges shown in Table D-1 reflect the difference between lower rotation ratios and higher rotation ratios. At greater deployment tempos—and thus lower rotation ratios—more forces could be sent to Iraq, but fewer forces would be available for other missions (since more forces would be deployed or recovering from deployments).

If DoD used all of its existing forces and two newly created Army divisions to occupy Iraq under a unit-rotation policy (employing all of the options examined in this analysis), it would have 15⅔ to 23⅓ active-component combat brigades available for other operations (see Table D-2). A larger number of brigades, 23⅔ to 31⅓, would be unavailable. In CBO's analysis, the decision to eliminate the requirement for Army rapid-reaction forces would decrease the number of Army combat brigades available for other missions but increase the number available for use in Iraq. The decision to use the Marine Corps in occupying Iraq would increase the potential size of the occupation force but reduce the number of Marine Corps brigades available for other missions. Creating additional Army divisions would (after those units were fully available) raise the number of combat brigades immediately available for other missions, including fighting a major war, as well as the number available for occupation duty in Iraq.

Table D-1.
Disposition of Active Combat Brigades Under the Base Case

Mission	Unavailable for Other Missions: Committed	Unavailable for Other Missions: Recovering	Available for Other Missions: Preparing	Available for Other Missions: In Reserve	Total
			Army		
South Korea	2	0	4⅓ to 0[a]	0	6⅓ to 2
Rapid Reaction	0	0	0	4⅓	4⅓
Unit Conversion	2	0	0	0	2
Afghanistan	2	2	4 to 2⅓	0	8 to 6⅓
Subtotal	6	2	8⅓ to 2⅓	4⅓	20⅔ to 14⅔
Available for Iraq	3 to 5⅔	3 to 5⅔	6⅓ to 7	0	12⅓ to 18⅓
Total, Army	14⅓ to 19⅓		18⅔ to 13⅔		33
			Marine Corps		
Okinawa	1	0	0	0	1
Amphibious Ready Groups	1⅓	1⅓	2⅔ to 1⅔	0	5⅓ to 4⅓
Subtotal	2⅓	1⅓	2⅔ to 1⅔	0	6⅓ to 5⅓
Uncommitted	0	0	1⅔ to 2⅔	0	1⅔ to 2⅔
Total, Marine Corps	3⅔		4⅓		8
			All Active Combat Brigades		
Total for All Missions	18 to 23		23⅓ to 18		41

Source: Congressional Budget Office.

Note: Where a range is given, the first number corresponds to a higher rotation ratio and the second to a lower rotation ratio. Numbers may not add up to totals because of rounding.

a. U.S. forces in South Korea are maintained on the basis of an individual-replacement system. As such, Korea does not require the Army to maintain any rotation base of units. However, the Army's policy is to avoid assigning personnel to back-to-back tours in Korea and then to units scheduled for deployment. The need to avoid such back-to-back tours means that there must be a pool of units available to receive personnel returning from Korea. The range of values shown in this entry reflects uncertainty about the size of that pool.

Table D-2.
Disposition of Active Combat Brigades Under All Options

Mission	Unavailable for Other Missions: Committed	Unavailable for Other Missions: Recovering	Available for Other Missions: Preparing	Available for Other Missions: In Reserve	Total
			Army		
South Korea	2	0	4⅓ to 0[a]	0	6⅓ to 2
Unit Conversion	2	0	0	0	2
Afghanistan	2	2	4 to 2⅓	0	8 to 6⅓
Subtotal	6	2	8⅓ to 2⅓	0	16⅓ to 10⅓
Available for Iraq	5⅔ to 9	5⅔ to 9	11⅓ to 10⅔	0	22⅓ to 28⅓
Total, Army	19⅓ to 26		19⅔ to 13		39
			Marine Corps		
Okinawa	1	0	0	0	1
Amphibious Ready Groups	1⅓	1⅓	2⅔ to 1⅔	0	5⅓ to 4⅓
Subtotal	2⅓	1⅓	2⅔ to 1⅔	0	6⅓ to 5⅓
Available for Iraq	⅓ to 1	⅓ to 1	⅔ to 1	0	1⅔ to 2⅔
Total, Marine Corps	4⅓ to 5⅓		3⅔ to 2⅔		8
			All Active Combat Brigades		
Total for All Missions	23⅔ to 31⅓		23⅓ to 15⅔		47

Source: Congressional Budget Office.

Note: Where a range is given, the first number corresponds to a higher rotation ratio and the second to a lower rotation ratio. Numbers may not add up to totals because of rounding.

a. U.S. forces in South Korea are maintained on the basis of an individual-replacement system. As such, Korea does not require the Army to maintain any rotation base of units. However, the Army's policy is to avoid assigning personnel to back-to-back tours in Korea and then to units scheduled for deployment. The need to avoid such back-to-back tours means that there must be a pool of units available to receive personnel returning from Korea. The range of values shown in this entry reflects uncertainty about the size of that pool.