



USMC Active and Reserve Force Structure and Mix Study

Volume IV: Analysis of Alternative Force Structures and Mixes

H. Dwight Lyons, Jr.
John D. Goetke

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Office of the President

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INTRODUCTION

This research memorandum is volume IV of the Marine Corps portion of the Active and Reserve Force Structure and Mix Study. Congress mandated that the Secretary of Defense assess a wide range of alternative force structures capable of carrying out the missions projected for the mid to late 1990s. This assessment consists of two parts. The first part is to be conducted by a federally funded research and development center that is independent of the military departments. The second part of the study is to be conducted by the Secretary of Defense and Chairman of the Joint Chiefs of Staff (JCS). Rand, the prime contractor for the first part of the study, contracted CNA to assess the Navy and Marine Corps forces. For background information or details on the study objectives, see volume I [1] or volume II [2].

This volume contains the detailed analysis of the alternative force structures and mixes. The first section describes how we reduced the 21 alternatives developed in volume III of this study [3] to the 10 we examined in detail, and discusses the development of detailed force structures for the remaining alternatives. The second section analyzes the following aspects of these alternatives:

- Response to major regional contingencies
- Forward-presence/rotation capability
- Qualitative aspects of sustaining the reserve (quantitative aspects are addressed by RAND)
- Transition costs, which are the transient or one-time costs to convert from the current (FY 1993) force structure to the alternatives
- Long-term or steady-state cost differences between the DOD Base Force and other alternatives.

The third section includes comments on other factors not addressed above but pertinent to the study. This discussion includes the composition of the active forces other than the Fleet Marine Force (called the non-FMF) and contributions of the Individual Ready Reserve (IRR). The final section summarizes the results.

This volume also contains three appendixes. Appendix A provides the detailed force structures for each alternative. Appendix B lists the unit designations used throughout the volume, and appendix C presents the current non-FMF force structure.

ALTERNATIVES FOR DETAILED ANALYSIS

SELECTING ALTERNATIVES

Table 1 lists the 21 alternative force structures developed in [3]. These alternatives are presented in terms of active and reserve Marine expeditionary forces (MEFs)--the Marine Corps' basic warfighting organization.¹ The number of MEFs shown in the table is the number of full war-strength MEFs that could be generated by the number of Marines in the active FMFs and the Selected Marine Corps Reserve (SMCR). That is, we used the wartime tables of organization to determine how many Marines would be in a war-strength MEF, and used that value as the measure of how many MEFs each alternative contains. The detailed structure of a "standard" MEF, which was developed by the Marine Corps' Force Structure Planning Group (FSPG) [4], is provided later.

Table 1. Original active/reserve MEF force mix alternatives

4 MEFs	3.5 MEFs	3 MEFs	2.5 MEFs
3/1	3/0.5	3/0	2.5/0
2.5/1.5	2.5/1	2.5/0.5	2/0.5
2/2	2/1.5	2.2/0.8	1.5/1
1.5/2.5	1.5/2	2.1/1	1/1.5
1/3	1/2.5	2/1	
		1.5/1.5	
		1/2	

Required Alternatives

The alternatives developed in volume III include three that we are required to address in this study. The first required alternative is the DOD Base Force, shown as the 2.2/0.8 alternative in table 1. Because this alternative is the result of actual planning, we were able to obtain troop lists detailing its structure [5, 6]. We used this plan as the basis for developing detailed force structures for the remaining alternatives. Because the DOD Base Force is an actual plan, its details are constantly being modified to account for fiscal and operational changes. Thus, the Marine Corps DOD Base Force structure presented in this research memorandum may differ slightly from the actual planned structure as it changes.

1. Smaller Marine air-ground task forces (MAGTF), such as Marine expeditionary brigades (MEBs) and Marine expeditionary units (MEUs) are formed from MEF forces.

The second required alternative maintains the SMCR at the level authorized for FY 1993 (at 42,400 instead of the 34,900 SMCR in the DOD Base Force), and reduces the active force so that the total cost is the same as for the DOD Base Force. We call this alternative the Congressional Base Case. Using estimated cost differences between active and reserve forces from [3], this alternative has 2.1 active and 1 reserve MEFs; thus, the Congressional Base Case is listed as 2.1/1 in table 1. The third required alternative is Congressman Les Aspin's option C, shown as the 2/1 case.

As can be seen, there is little significant difference among these required alternatives. All have about 2 active MEFs and a total force of about 3 MEFs. In fact, when we developed detailed structures for the Congressional Base Case and Mr. Aspin's option C, they were so alike that we did not list them separately in the detailed alternatives section. The Congressional Base Case had a slightly larger active force, but provided no significant increase in capability over option C. The additional active forces did not allow more rotation, did not affect response time to future contingencies, and did not affect our qualitative assessment of reserve force sustainability. They just cost the same as the DOD Base Force. Thus, we adopted option C (the 2/1 alternative) as a "surrogate" Congressional Base Case, even though option C costs less than the DOD Base Force. Because these three alternatives are so similar, we decided to retain more alternatives to be able to provide analysis of "a wide range of alternatives relating to the structure and mix of active and reserve forces" [7].

Table 1 includes one other alternative related to Marine Corps planning. When the FSPG developed the base force, it also determined how many more Marines were needed to support all of the assigned missions. In addition, the Reserve FSPG (RFSPG) considered a larger SMCR of 40,400 personnel. When these "buyback" options are added to the DOD Base Force, it consists of about 2.5 active and 1 reserve MEFs. Although there are minor differences between our detailed structure and that of the FSPG/RFSPG, the 2.5/1 alternative is about the same as the Marines' buyback option.

Reducing the List of Alternatives

To reduce the number of alternatives for detailed analysis to a manageable number, we developed three assumptions about the composition of future forces. We used these assumptions as rules-of-thumb to eliminate various alternatives:

- There will be a Selected Marine Corps Reserve (SMCR). This rule eliminated the alternatives with no reserve MEFs (3/0, 2.5/0).
- Active forces will be no larger than the FSPG buyback (about 2.5 MEFs). The Marines feel that a 2.5-MEF active

force, although constrained, could meet future commitments. This rule eliminated the alternatives with 3 active MEFs (3/0, which was also eliminated by the first rule, 3/1, and 3/0.5).

- The SMCR will be no larger than the active force. No other service has a reserve force larger than its active force. The Marine Corps is a force in readiness, not a force in reserve. Furthermore, reserve recruiters felt that, even with an equal active/reserve force, they would not be able to maintain the required number of prior-service Marines in the SMCR [7].¹ This rule eliminates all alternatives with more reserve than active MEFs (1.5/2.5, 1/3, 1.5/2, 1/2.5, 1/2).

Applying these rules-of-thumb to the list in table 1 eliminates nine alternatives. One other alternative was also removed--the 2.1/1 Congressional Base Case. This alternative was combined with Mr. Aspin's option C because, as discussed above, the two alternatives are virtually identical. Table 2 lists the alternatives that we analyzed in detail.

Table 2. Active/reserve MEF force mix alternatives analyzed

4 MEFs	3.5 MEFs	3 MEFs	2.5 MEFs
2.5/1.5	2.5/1	2.5/0.5	2/0.5
2/2	2/1.5	2.2/0.8	1.5/1
		2/1	
		1.5/1.5	

DETAILED FORCE STRUCTURES

Although the number of active and reserve MEFs in a particular alternative provides a convenient shorthand for expressing their relative force structures, we needed to know how many of the various units are in each of the alternatives to determine how quickly they could respond to contingencies. Because the response time depends on the types and sizes of reserve units incorporated in the deploying forces, we developed a detailed force structure that lists the numbers of each type unit in that alternative.

1. This issue is discussed further in the section on sustainability.

Baseline MEF

We used the baseline MEF developed by the FSPG as the basis for the "standard" MEF. The new MEF structure was developed to better counter anticipated future threats within fiscal constraints. Tables 3 through 6 describe this MEF by major element.¹ The tables provide the number of each type of unit in the MEF, its wartime table-of-organization personnel strength, and the total number of personnel in the element.

Table 3. Structure of baseline MEF command element

	MEF units	Unit strength	Total personnel
MEF CE (nucleus)	1	302	302
MEU CE	3	56	168
Hq, SRIG	1	51	51
H&S Bn	1	232	232
Intelligence Co	1	7	7
SCAMP	1	46	46
Counterintelligence Team	4	16	64
Topographic Platoon	1	47	47
FIIU	1	63	63
Int Platoon	1	55	55
FORECONCO	1	159	159
ANGLICO	1	248	248
UAV Co	1	130	130
H&S Co, Communication Bn	1	217	217
General Support Co	1	262	262
Direct Support Co	3	134	402
Service Co	1	388	388
H&S Co, Radio Bn	1	312	312
Radio Co	2	124	<u>248</u>
Command element total			3,401

1. Appendix B lists the abbreviations used to identify units in these and subsequent tables.

Table 4. Structure of baseline MEF ground combat element

	MEF units	Unit strength	Total personnel
Hq Co, Infantry Regt	2	271	542
Reconnaissance Co	2	92	184
Infantry Bn	6	929	5,574
Hq Battery, Artillery Regt	1	342	342
Direct Support Artillery Bn	3	742	2,226
MLRS Bn	0.3 ^a	439	127
Combat Engineer Bn	1	645	645
Hq Co, Combined Arms Regt	1	271	271
Tank Bn	1	790	790
LAR Co	1	148	148
Light Armor Infantry Bn	2	832	1,664
AAV Bn	1	1,144	1,144
LAR Bn	1	878	878
Division Hq	1	297	297
Hq Co, H&S Bn	1	61	61
MP Co	1	71	71
Service Co	1	118	118
Communication Co	1	331	331
Truck Co	1	235	235
SSC Team	1	12	12
Division Band	1	51	<u>51</u>
Ground combat element total			15,711

a. The FSPG plans for one MLRS battalion in the active FMF. We assumed one battery would be apportioned to each of the MarDivs.

Table 5. Structure of baseline MEF combat service support element

	MEF units	Unit strength	Total personnel
H&S Co, Maintenance Bn	1	112	112
Ordnance Maintenance Co	1	220	220
Motor Transport Maintenance Co	1	346	346
Engineer Maintenance Co	1	215	215
Electronic Maintenance Co	1	295	295
G/S Maintenance Co	1	248	248
H&S Co, Supply Bn	1	220	220
Supply Co	1	623	623
Ammunition Co	1	307	307
Medical Logistics Co	1	19	19
H&S Co, Engineer Support Bn	1	280	280
Engineer Support Co	1	529	529
Bridge Co	1	90	90
Bulk Fuel Co	1	190	190
Engineer Co	3	141	423
H&S C, Landing Support Bn	1	94	94
Landing Support Equipment Co	1	171	171
B&T Operations Co	1	202	202
Landing Support Co	3	68	204
H&S Co, Motor Transport Bn	1	262	262
Motor Transport GS Co	1	394	394
Motor Transport DS Co	2	175	350
H&S Co, Medical Bn	1	44	44
Medical Co (Surg)	2	28	56
Medical Co (C&C)	4	18	72
H&S Co, Dental Bn	1	5	5
Dental Co	3	0	0
H&S Co, H&S Bn	1	495	495
Service Co	1	510	510
Communication Co	1	354	354
MP Co	1	135	<u>135</u>
Combat service support element total			7,465

Table 6. Structure of baseline MEF aviation combat element

	MEF units	Unit strength	Total personnel
Hq, Marine Air Wing	1	342	342
MWHS	1	55	55
Hq, MACG	1	164	164
MWCS	1	406	406
MACS	1	332	332
Hq, MATCS	1	24	24
Det, MATCS	2	76	152
MASS	1	223	223
Marine Air Defense Bn	1	979	979
H&HS, MWSG	1	51	51
MWSS (FW)	2	701	1,402
MWSS (RW)	2	629	1,258
Hq, Marine Air Group (FW)	2	97	194
MALS	2	360	720
VMA	2	419	838
VMA (AW)	2	289	578
VMFA	4	242	968
Hq, Marine Air Group (RW)	2	97	194
MALS	2	338	676
HMH	2	335	670
HMM	8	193	1,544
HMLA	3	449	1,347
VMGR	1	324	324
VMAQ	2	235	470
Aviation combat element total			13,911

The command element (CE) includes the MEF CE¹ and the Surveillance, Reconnaissance, and Intelligence Group (SRIG). The SRIG's major functions are intelligence, liaison, and communications for the MEF staff. Two of the active MEF CEs also have three MEU CEs. MEUs are small MAGTFs that routinely deploy as the landing forces of Sixth and Seventh Fleets. A MEF CE also can break out two MEB CEs.

The GCE, which is made up of a Marine division (MarDiv), is where the biggest difference between current and planned structure occurs. That difference is in the maneuver elements. Currently, a MarDiv has three infantry regiments (each with three infantry battalions) plus a separate tank battalion. The newly developed MEF has two infantry regiments and a combined arms regiment (CAR). The CAR's maneuver elements are two light armored infantry (LAI) battalions² and a tank battalion. By redesigning the division this way, the MEF has enough tactical mobility assets to move assault elements of all three maneuver regiments simultaneously. The assault amphibian (AA) battalion can lift an infantry regiment, the ACE's helicopters can lift the second infantry regiment, and the organic vehicles of the CAR make it "self-mobile."

The ACE is a Marine aircraft wing (MAW). The MAW consists of 2 fixed-wing air groups with 8 squadrons, 2 helicopter air groups with 13 squadrons, and a Marine air control group (MACG). Whereas the regimental headquarters in the GCE are fighting commands, the air group headquarters perform only administrative and maintenance functions. The wing headquarters and MACG provide the aviation "warfighting" command-and-control functions.

The CSSE is a force service support group (FSSG). An FSSG consists of eight functionally organized battalions. These battalions support MEF-level operations. Detachments from these battalions would be used to form the CSSEs for MAGTFs smaller than a MEF.

1. Marine Corps terminology can sometimes be confusing. All MAGTFs, of which the MEF is the largest, have four major elements: the CE, the ground combat element (GCE), the aviation combat element (ACE), and the combat service support element (CSSE). Within the CE, what would be called a headquarters in most organizations (that is, the commander and his staff) is also called a CE.

2. For those familiar with current Marine unit structure, these LAI battalions are not the same as the current LAI battalions. Current LAI battalions, which are being renamed light armored reconnaissance (LAR) battalions, are designed primarily as cavalry units. Their main functions are screening, guarding, and reconnaissance. The LAI battalions in the CAR are designed as "mechanized" infantry battalions.

Determining Force Structure for Alternatives

Table 7 summarizes the baseline MEF structure by major component; the total is about 40,500 Marines [5]. To the Marines, *structure* means the number of troops in the wartime table-of-organization. Actual peacetime manning for this MEF will be less. On average, peacetime manning in active FMF units is 90 percent of structure; for SMCR units, the manning goal is 100 percent.¹ Active units are manned at less than their wartime strength. The budget usually precludes manning all units at the required wartime level. Furthermore, peacetime requirements can generally be satisfied at the lower manning levels. Reserve units, which are used extensively only in wartime, need to be manned at their wartime strength.

Table 7. Manning structure of the FSPG baseline MEF

	MEF
CE	3,400
GCE	15,700
ACE	14,000
CSSE	<u>7,400</u>
Total	40,500

Because active FMF units are manned at an average of 90 percent of structure, the available structure "spaces" (table-of-organization billets) for active MEFs is larger than the number of Marines available. In developing alternatives, our goal was to develop force structures for which the FMFs could field specified numbers of active force MEFs at their wartime strength. For example, the 2/1 alternative's active FMF must include enough Marines to deploy two wartime MEFs. This alternative's number of billets (i.e., structure) will be larger because they are not manned at 100 percent.

1. The RFSPG report [6] lists SMCR units as manned at 90 percent, but separately lists about 10 percent of reservists in initial active-duty training (IADT). These reservists belong to units but have not been through boot camp yet. Rather than consider them separately, we use a manning goal of 100 percent for SMCR units in determining available structure.

To determine the limits on active structure for the alternatives,¹ we divided the number of MEFs by 0.9 to account for 90 percent average manning. Thus, the 2/1 alternative has an active structure (number of table-of-organization billets) of 2.2 MEFs, but because that structure is *manned* (number of Marines) at 90 percent, it can field 2 war-strength MEFs. That is, the 2/1 alternative has 81,000 Marines in the FMF (2 x 40,500) but 90,000 structure spaces (2 x 40,500/0.9). Although the process seems complicated, we used structure as the measure in developing the detailed alternatives because, although average manning is 90 percent, manning of specific units varies considerably. Because of this variation, it was much easier to deal with structure than manning.

Developing alternative force structures is a complex and partially subjective process. Several often conflicting factors must be balanced if a particular alternative is to be realistic. For example, the geographic dispersion of Marine units in peacetime requires the duplication of some command and support functions. Because these factors must be considered, building force alternatives was not a simple matter of multiplying the standard MEF by the number of MEFs to be included in an alternative. In addition, because some subjective judgments must be made, we do not claim that the structures developed would exactly match those the Marines would develop for the same alternatives. The following paragraphs discuss how we developed the detailed structures.

First, we determined the active force structure. We started by scaling the DOD Base Force up or down to the size of the active force in the alternative. After that, we modified the numbers of units to account for the following factors:

- Geographic separation of units. Currently, the 3 active MEFs are located on the east coast, on the west coast, and in Okinawa. Ground forces on the west coast are split between Camp Pendleton and Twenty-nine Palms, California. Because of this wide geographic dispersion, economies of scale cannot be taken advantage of in the areas of command and support. This dispersion requires duplication of some command and support units in the active force. We used the FSPG base force as a guide to determine combat-to-support ratios for forces less than a MEF.
- Geographic sites supported. For all cases with more than 1.5 active MEFs, we assume Marine forces will continue to be dispersed between the current locations. For alternatives with 1.5 active MEFs, we assume that the

1. Except for the DOD Base Force, reference [5] lists both structure and manning. It should be noted that this alternative follows the same rule, however. If units are counted, its FMF has about 2.4 MEFs, but only 2.2 MEFs at full strength.

Okinawa bases will be closed. At this level, active forces could not support MEU deployments and deployments to Okinawa.

- **Peacetime forward-presence/rotation base.** Some Marine units are forward deployed to Okinawa under the Unit Deployment Program (UDP). UDP is a cost-savings program. Deploying units instead of permanently stationing Marines and their families in Okinawa reduces the facilities required (e.g., family housing) and saves the cost of permanent-change-of-station (PCS) moves (e.g., the cost of shipping household goods). In addition, Marines routinely deploy MEUs to the Mediterranean and Western Pacific.¹ Because forward-deployed units are rotated periodically (about every six months), a rotation base is needed. Certain units, such as infantry battalions, are more heavily tasked for forward deployments than others. For each alternative, we tried to build in as large a rotation base as possible, but rotation was always a secondary consideration to wartime or geographic dispersion requirements.
- **Major command elements.** We retained three MEF CEs (the commander/staff part, not the entire CE), MarDiv, MAW, and FSSG headquarters in all cases with greater than 1.5 active MEFs. For alternatives with 1.5 active MEFs, we retained two sets of major CEs/headquarters (assuming that the MEF in Okinawa would no longer exist).

Once we had determined the active structures, we designed the SMCR forces to increase the warfighting capability as much as possible. We had to consider, however, special aspects of the reserves. First, they had to be administered. The current division/wing/FSSG structure is useful for that purpose. Thus, even though certain headquarters might not be required from a purely warfighting perspective, they were retained. Second, certain types of units cannot be increased, either because the specialists needed cannot be recruited (e.g., radio companies) or because procuring the equipment is not economically feasible (e.g., AV-8B or EA-6 aircraft). Reference [8] identified these types of units. In those cases, additional structure was used to create similar units if possible (e.g., increasing F/A-18 squadrons instead of AV-8B squadrons).

We applied all these factors and assumptions in an iterative process to match the structure ceilings based on the number of active and reserve MEFs in each alternative. After we went through the list the first time, the total was compared to the "allowable" structure and

1. Recently, Marines have also had a MEU deployed to the Persian Gulf. We do not know whether this will become a routine deployment or not.

adjusted until it was within one percent of the ceilings for each alternative. Once we were within this self-imposed margin of error, we considered the force structure completed. Table 8 summarizes the forces resulting from this procedure. Appendix A contains the detailed force structures.

Table 8. Summary of alternative force structures

		2.5/1.5		2/2		2.5/1		2/1.5		2.5/0.5	
		Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve
CE											
MEF CE	3	1	3	1	3	0.5	3	1	3	0	0
SRIG	3	1	2.2	1.8	3	0.5	2.2	1	3	0	0
GCE											
Division HQ	3	1	2.8	1.2	3	1	2.8	1	3	0.4	0.4
Infantry Regt HQ	7	2	4	4	7	1	4	3	7	0	0
Infantry Bn	20	8	12	14	20	4	12	9	20	0	0
Combined Arms Regt HQ	2	2	2	2	2	1	2	1	2	1	1
LAI Bn	4	4	4	4	4	2	4	3	4	2	2
Artillery HQ	3	1	2.5	2	3	1	2.5	1	3	0	0
Artillery Bn	9	5	7	6	9	4	7	5	9	1	1
ACE											
Wing HQ	3	1	3	1	3	1	3	1	3	1	1
MACG	3	1.2	2.5	1.5	3	0.9	2.5	1.2	3	0.2	0.2
MWSS	2.4	1.8	1.8	1.8	2.4	0.8	1.8	1.8	2.4	0.5	0.5
MAG HQ	10	6	8	8	10	4	8	6	10	2	2
Aircraft Sqdn	59	36	50	44	59	14	50	31	59	12	12
CSSE											
Group HQ	3	1	2.6	1.4	3	1	2.6	1	3	0.5	0.5
Battalions	24	10.5	20.8	16.1	24	10	20.8	10.5	24	6	6

Table 8. (Continued)

		2.2/0.8		2/1		1.5/1.5		2/0.5		1.5/1	
		Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve	Active Reserve
CE	MEF CE	3	0.5	3	0.5	2	1	3	0	2	0.5
	SRIG	2.5	0.8	2.2	0.8	1.5	1.5	2.2	0.5	1.5	0.8
GCE	Division HQ	2.8	1	2.8	0.5	1.8	1.2	2.8	0.4	1.8	0.7
	Infantry Regt HQ	6	1	4	2	4	2	4	1	4	1
	Infantry Bn	16	2	12	7	9	9	12	3	9	6
	Combined Arms Regt HQ	2	1	2	1	2	1	2	1	2	1
	LAI Bn	4	2	4	2	3	3	4	1	3	3
	Artillery HQ	2.9	1	2.5	0.5	1.9	1.1	2.5	0	1.9	1
	Artillery Bn	7.5	4	7	2	6	5	7	1	6	2
ACE	Wing HQ	3	1	3	1	2	1	3	1	2	1
	MACG	2.8	1	2.5	0.5	2	1	2.5	0	2	0.5
	MWSS	2.2	0.5	1.8	1.0	1.2	1.8	1.8	0.5	1.2	1
	MAG HQ	9	4	8	4	6	6	8	2	6	4
	Aircraft Sqdn	55	14	50	21	41	19	50	13	41	19
CSSE	Group HQ	2.6	1	2.6	0.5	1.7	1.4	2.6	0.2	1.7	1
	Battalions	20.8	10	20.8	7.9	12.8	12.2	20.8	4.8	12.8	9.4

ANALYSIS OF ALTERNATIVES

MAJOR REGIONAL CONTINGENCY RESPONSE CAPABILITY

Perhaps the most important aspect of all the alternative force structures is their ability to carry out their wartime missions. This ability depends on two factors: how much force is required and how quickly it is needed. To measure the capability of the alternatives, we used four hypothetical scenarios from the Defense Planning Guidance (DPG). The current version of the DPG puts less emphasis on fighting the Soviets on a global scale and more emphasis on conflict with regional powers. These conflicts are called major regional contingencies (MRCs). The detailed discussion of the locations, requirements, and means by which Marine forces would deploy for these scenarios is classified and is contained in volume V of this report [9]. In this volume, we identify the scenarios as MRCs I, II, III, and IV.¹

The DPG scenarios include lists of which forces are required and when they must arrive in theater. Forces for each scenario are divided into two main groups: the initial response force (IRF), which must be on scene quickly, and the decisive force (DF), which arrives later (for further details on the purposes and capabilities of IRFs and DFs, see [9]). Forces listed in the scenarios are converted to "MEF equivalents" and used as the measure of whether alternative structures have enough forces and whether they can respond to the stated requirement in time. To depict the alternatives' responsiveness, we use force-generation curves. These match the available forces to the scenario requirement.

Response Times for Different Types and Sizes of Forces

For each alternative force structure, we can combine the active and reserve forces in different ways. Each combination needs a different amount of time to respond. For example, an alternative with 2 active and 1 reserve MEFs could be deployed several ways. Both active MEFs could be deployed, followed by the reserve MEF. Alternatively, one active MEF could be deployed, followed by two MEFs with different combinations of active and reserve forces. Each of these options would require a different amount of time to respond. For this report, we determined the combinations of forces that came closest to meeting the stated scenario response times. Each of the force-generation curves represents this "best case." Because the responsiveness of a MEF with integrated active and reserve forces depends on the level of reserve forces used, we had to use the detailed structures to determine the level at which reserves must be integrated for each deploying MEF. Only one generalization can be made: all IRFs are active forces (up to the limit of active forces available in an alternative); reserves cannot be mobilized and prepared to meet the timing requirements of IRFs.

1. MRCs I, II, and III are single contingencies. MRC IV is a concurrent-contingency scenario.

We present each alternative's response to the requirement as a range between a minimum and maximum time to get in theater. This range is used to represent the uncertainty of transportation time and the time needed for reserves to be as ready as active forces. Volume III [3] discusses in detail the time required to prepare reserve forces. The training time for ground combat units is the constraint, and the amount of time needed depends on the size of unit. Times are summarized below:

- All active forces are available to deploy immediately.
- Post-mobilization training time for reserve units deploying as companies is about 30 to 35 days, or 4 to 5 weeks.
- Post-mobilization training time for reserve units deploying as battalions is 60 to 70 days, or 9 to 10 weeks.
- Post-mobilization training time for reserve units deploying as regiments is 90 to 120 days, or 13 to 17 weeks.
- Post-mobilization training time for reserve MEFs is 120 to 180 days, or 17 to 26 weeks.

Two additional times are needed to determine the responsiveness of forces. The first is the time needed to transport a MEF-size unit to the theater. In the DPG scenarios, the fastest a MEF-size unit arrives is two weeks. During Desert Shield/Storm, it took about four weeks to deploy a MEF. Thus, the range for transportation time is two to four weeks. The second time required is that required to mobilize reserves, namely the interval between the decision to activate a unit and when it arrives at the station of initial assignment (SIA) to begin post-mobilization training. Based on Desert Shield/Storm activations (described in [2]), we use two weeks for mobilization time.

Combining these times, we calculated the ranges of reaction times (how long before forces arrive in theater) for five different force mixes:

- An all-active unit can be in theater in 2 to 4 weeks.
- A mixed active/reserve unit, with reserves integrated at the company level,¹ can be in theater in 8 to 11 weeks.

1. In this alternative, we also allowed one battalion-size unit to be included without altering the reaction times. Some of the alternatives needed just one battalion in a MEF that otherwise required only company-level reserve augmentation. We assumed that, if only one battalion is needed, the "best" available reserve battalion could be chosen, and by focusing on training and possibly assigning active staff officers to some key positions, that battalion could be ready within a month.

- A mixed active/reserve unit, with reserves integrated at the battalion level, can be in theater in 13 to 16 weeks.
- A mixed active/reserve unit, with reserves integrated at the regimental level, can be in theater in 17 to 23 weeks.
- An all-reserve MEF-size force can be in theater in 21 to 32 weeks.

Responsiveness of Alternative Force Structures

We use these reaction times to generate best-case ranges of force-response times for each alternative for each MRC. These response times, which are illustrated in figures 1 through 25, show how well the alternative forces meet the stated requirements.¹ They are based strictly on post-mobilization training time and the assumed transportation times. In the figures, we do not consider the availability of transportation. Our intent is to show when the forces can be ready and examine the implications. For example, if an alternative's forces are ready four weeks early, that alternative provides four weeks of "flexibility" to decide when to activate reserve forces. (For further discussion of the mode and availability of transportation, see volume V.)

Figures 1 through 5 illustrate the alternatives' capability to react to MRC I. As figure 1 shows, all alternatives with 2.5 active MEFs easily meet the required reaction times. In fact, alternatives with 2.5 active MEFs could meet this contingency's requirements solely with active forces. We show the DF as being a mixed MEF with reserves integrated at company level, however, to illustrate that, even with reserves activated, the 2.5-active-MEF alternatives exceed the requirement. The National Command Authority can use this early arrival window as a buffer before deciding to call up the reserves. Figure 3 shows similar response from the 2.2/0.8 alternative (DOD Base Force), although the last part of the DF does not arrive as quickly as that of the alternatives with 2.5 active MEFs.

Alternatives with 2 active MEFs (figure 2) meet the IRF requirements on time, and the minimum response time almost meets the DF requirement (the last 0.5 MEF is a week late). The first half of the DF can be ready earlier than required because reserves are integrated at the company level. The second half requires integration at the regimental level and therefore takes longer to prepare for combat. Alternatives with 1.5 active MEFs (figures 4 and 5) are similar, except that the first half of the DF arrives slightly late because it has reserve forces integrated at battalion level.

1. In some cases, one graph shows multiple alternatives because their response times are identical.

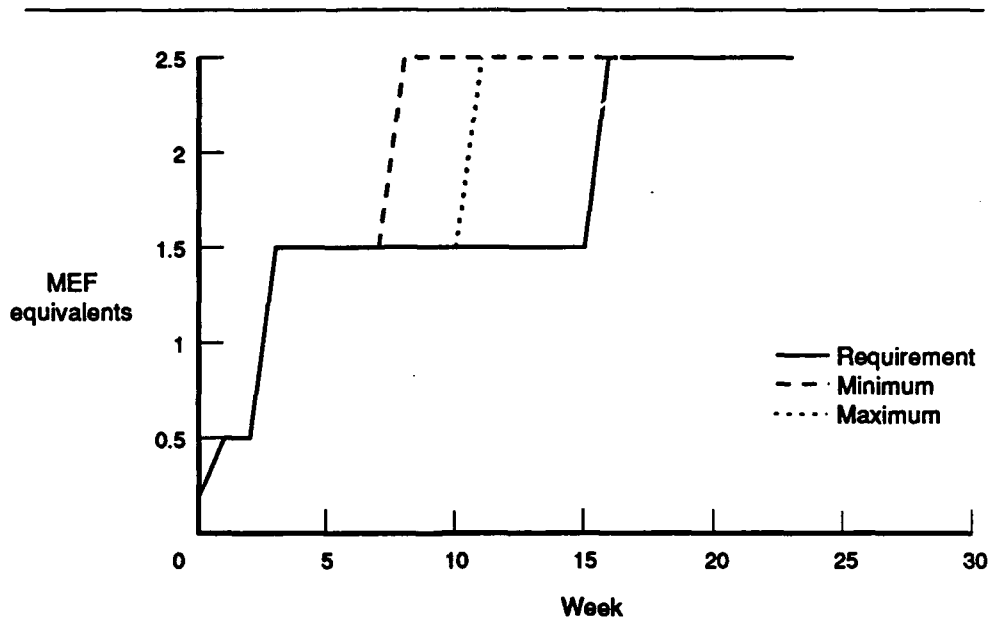


Figure 1. Response of alternatives 2.5/1.5, 2.5/1, and 2.5/0.5 to MRC I

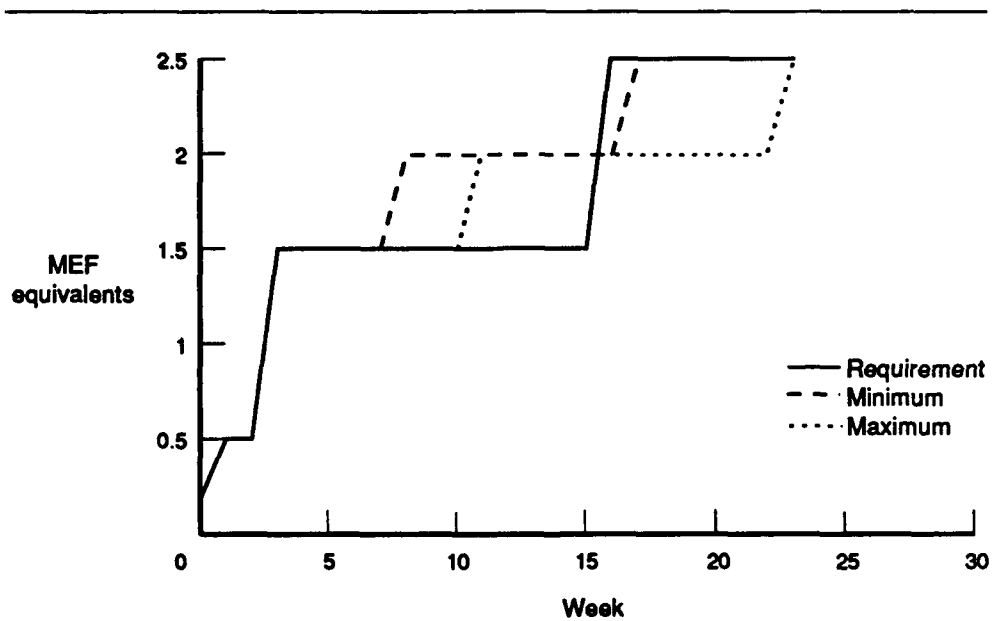


Figure 2. Response of alternatives 2/2, 2/1.5, 2/1 and 2/0.5 to MRC I

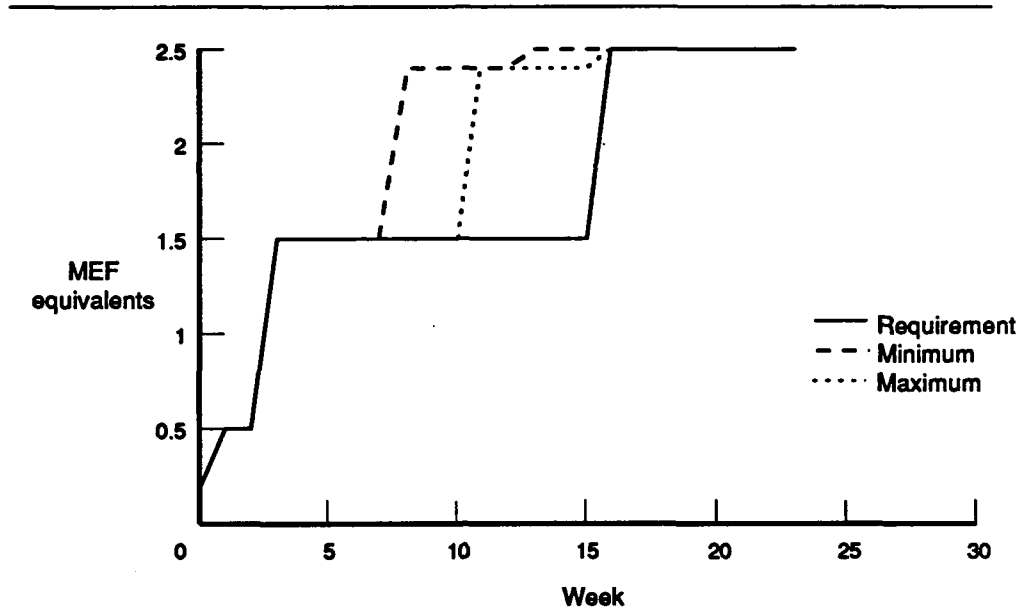


Figure 3. Response of the 2.2/0.8 alternative to MRC I

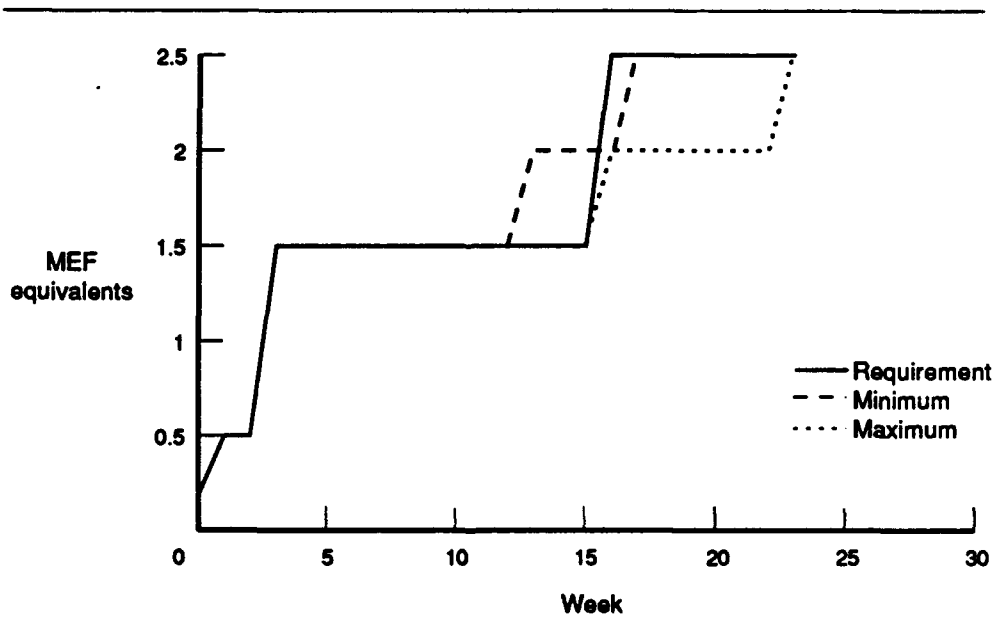


Figure 4. Response of the 1.5/1.5 alternative to MRC I

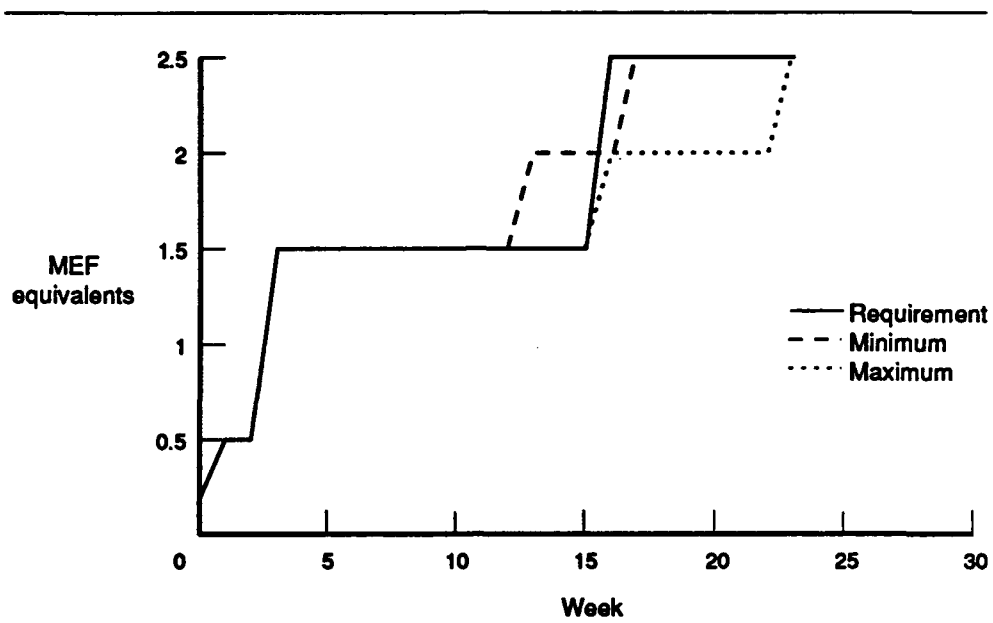


Figure 5. Response of the 1.5/1 alternative to MRC I

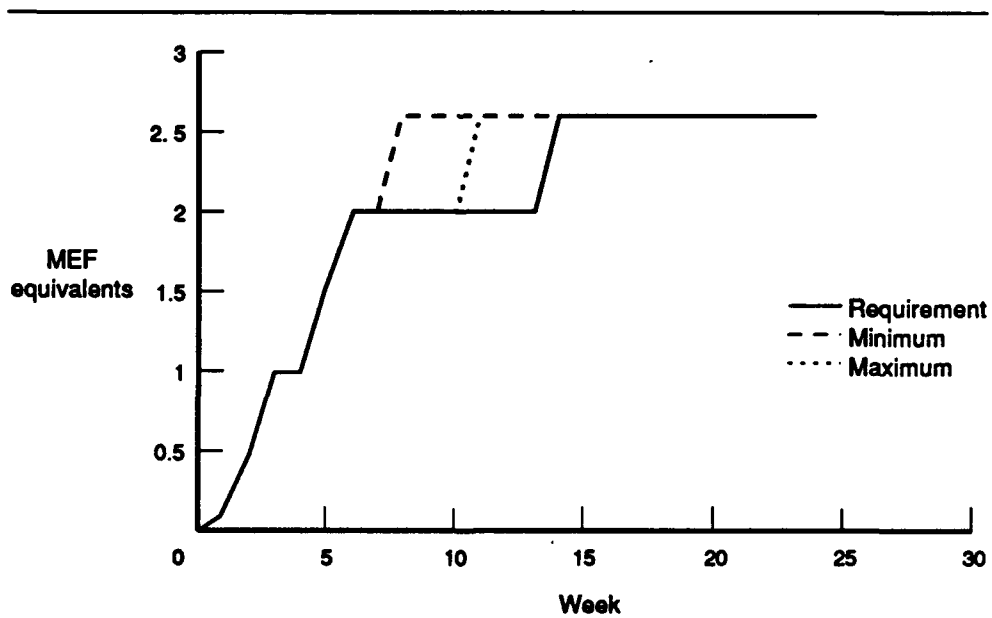


Figure 6. Response of alternatives 2.5/1.5, 2.5/1, and 2.5/0.5 to MRC II

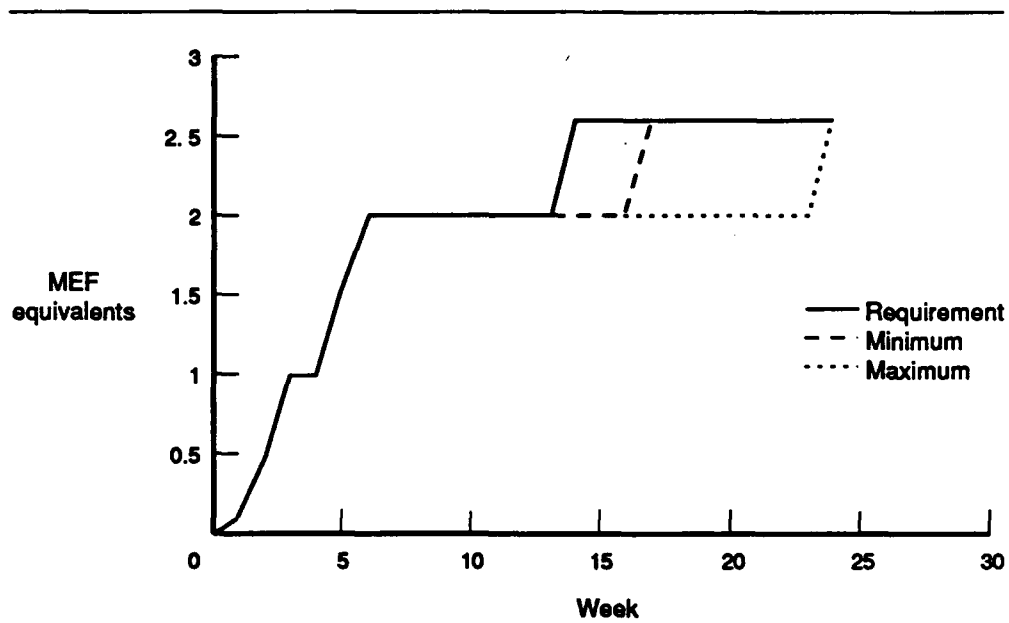


Figure 7. Response of alternatives 2/2, 2/1.5, and 2/1 to MRC II

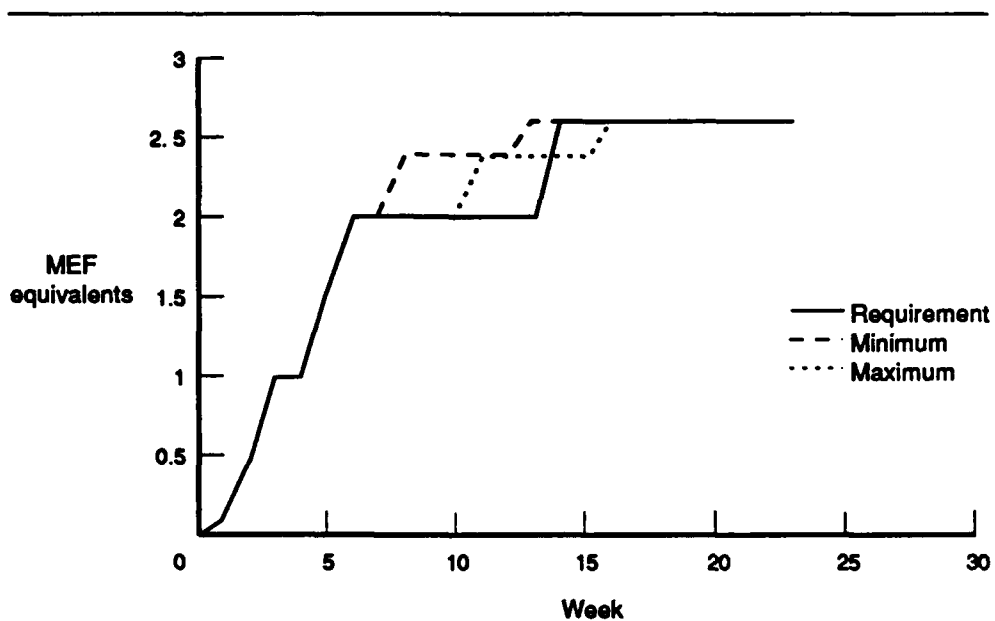


Figure 8. Response of the 2.2/0.8 alternative to MRC II

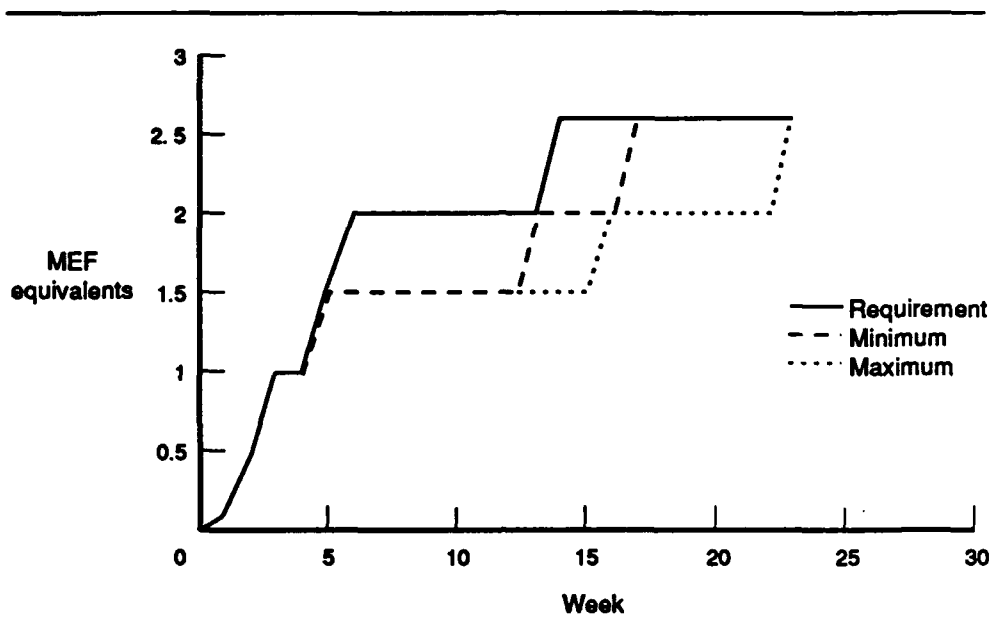


Figure 9. Response of the 1.5/1.5 alternative to MRC II

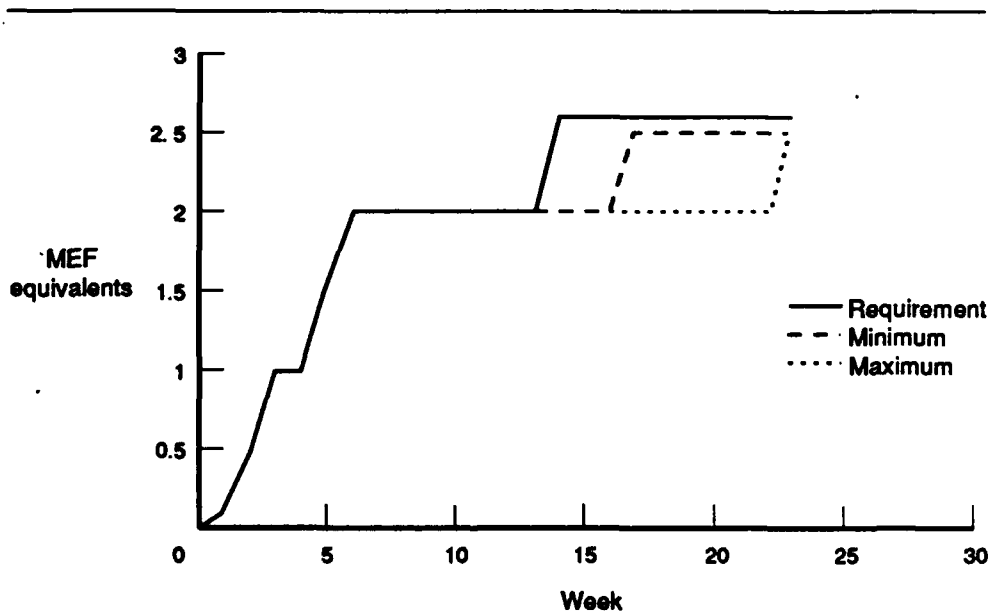


Figure 10. Response of the 2/0.5 alternative to MRC II

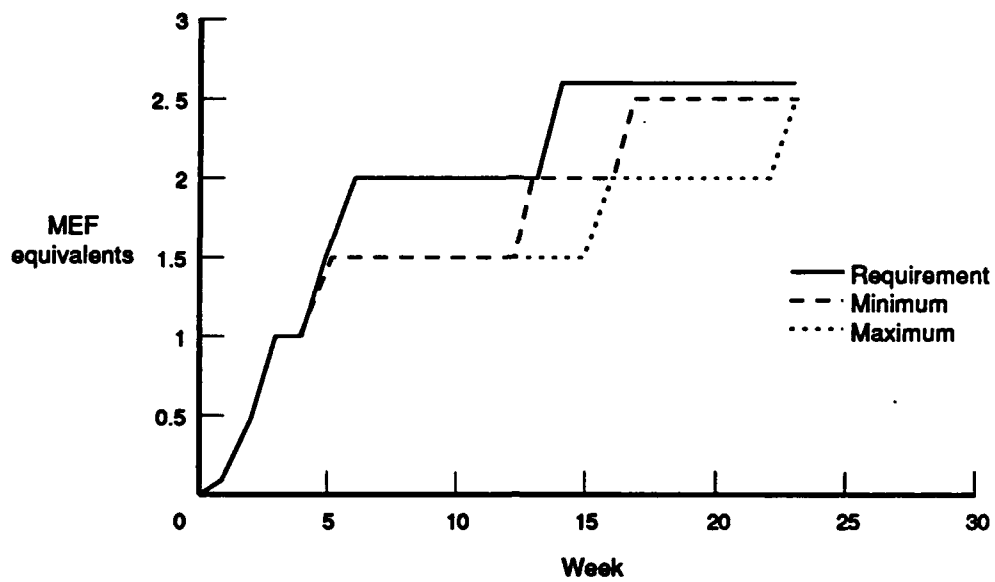


Figure 11. Response of the 1.5/1 alternative to MRC II

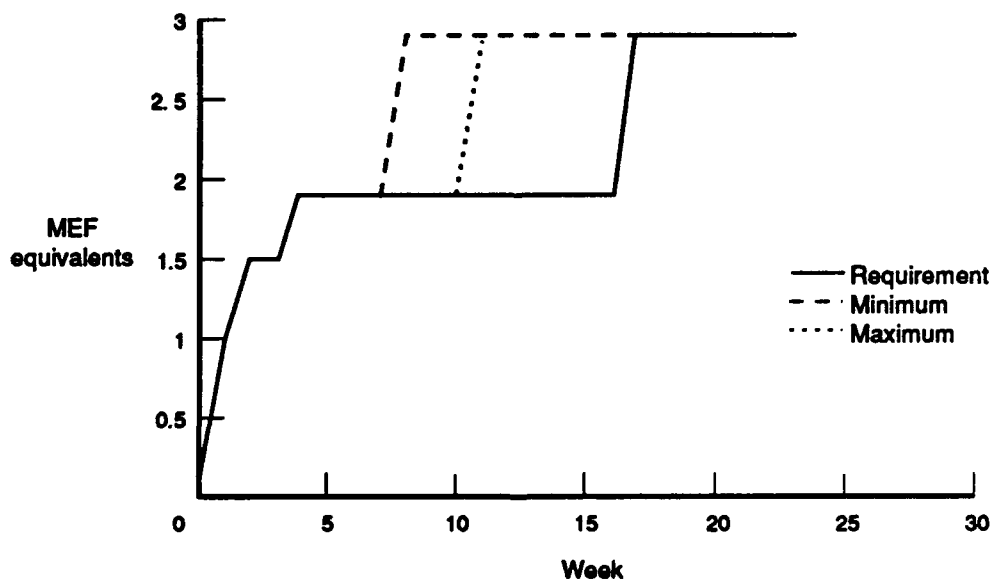


Figure 12. Response of alternatives 2.5/1.5, 2.5/1, and 2.5/0.5 to MRC III

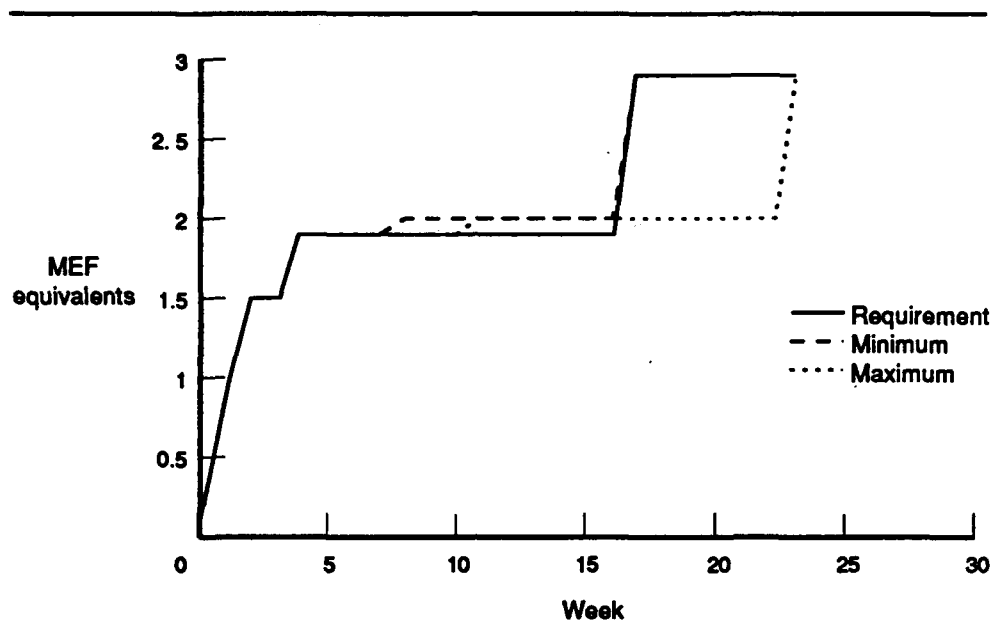


Figure 13. Response of alternatives 2/2, 2/1.5, and 2/1 to MRC III

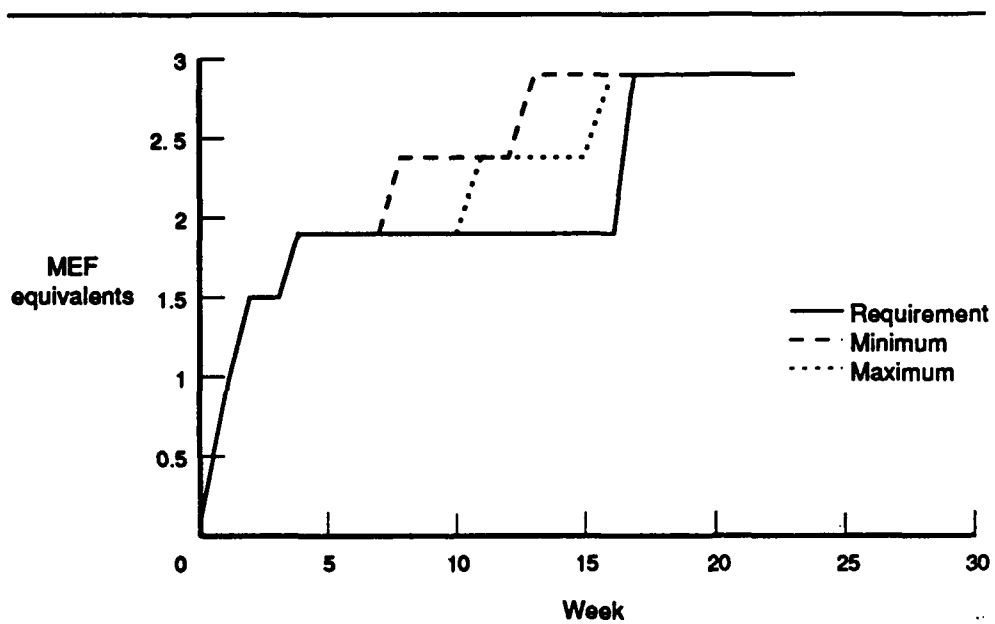


Figure 14. Response of the 2.2/0.8 alternative to MRC III

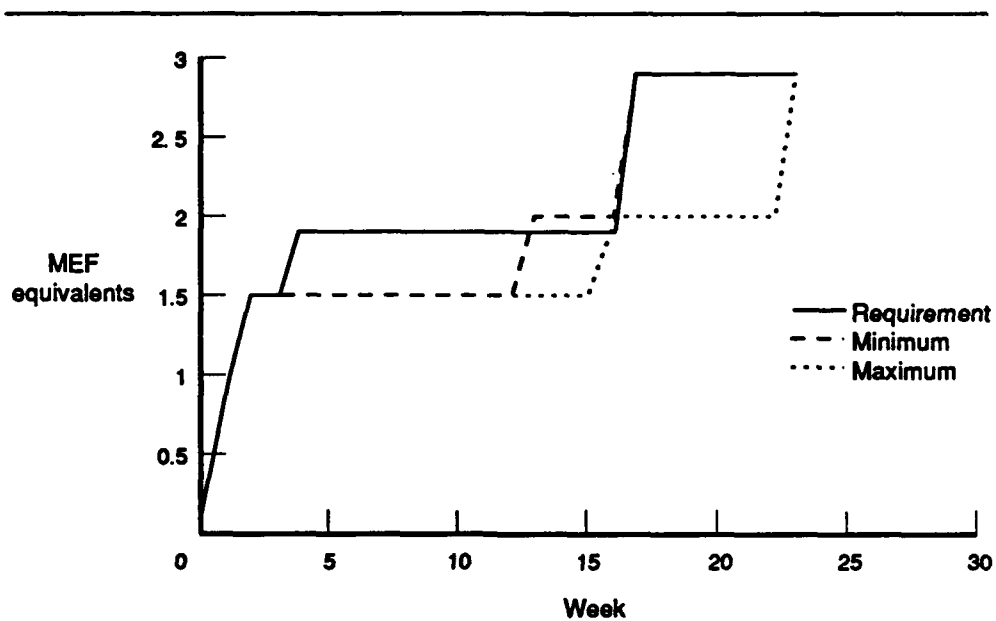


Figure 15. Response of the 1.5/1.5 alternative to MRC III

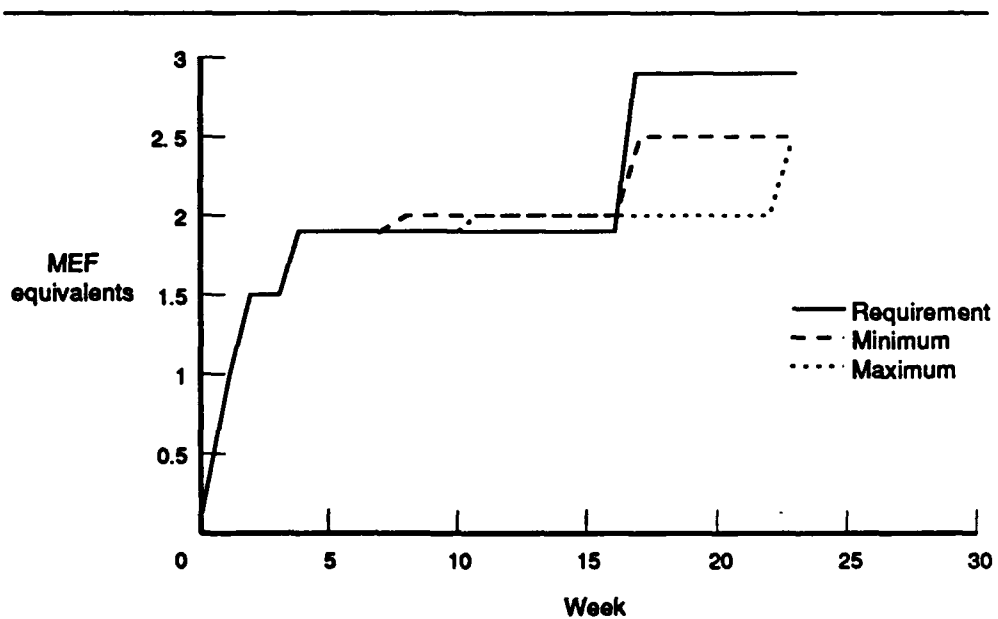


Figure 16. Response of the 2/0.5 alternative to MRC III

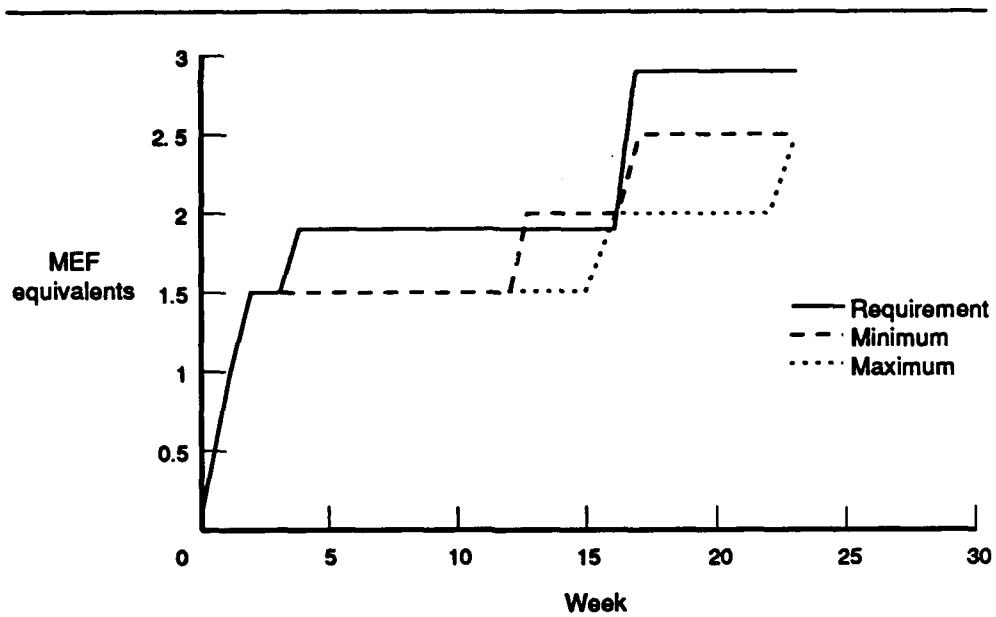


Figure 17. Response of the 1.5/1 alternative to MRC III

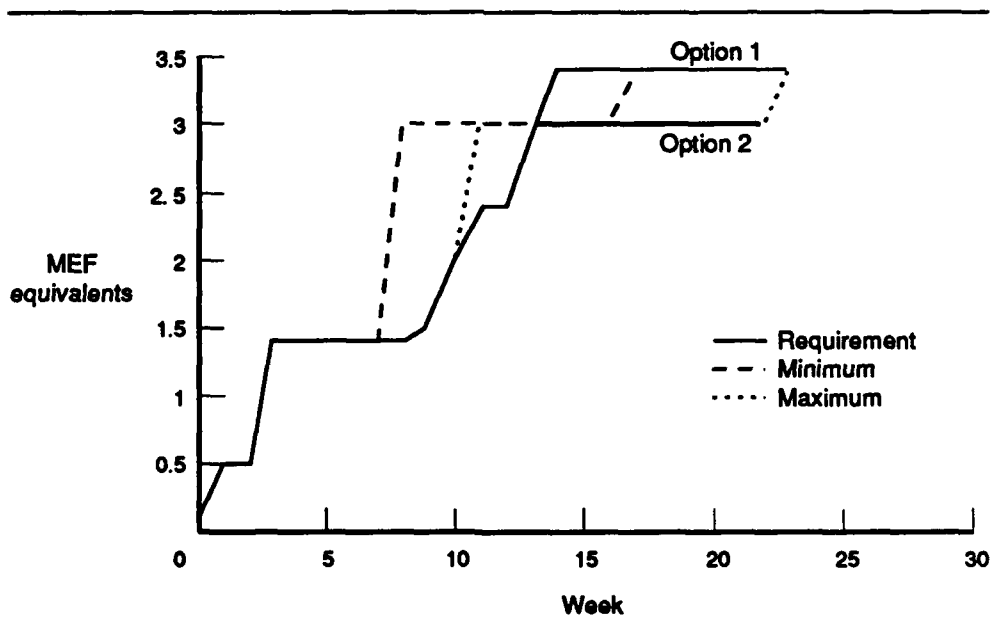


Figure 18. Response of alternatives 2.5/1.5 and 2.5/1 to MRC IV

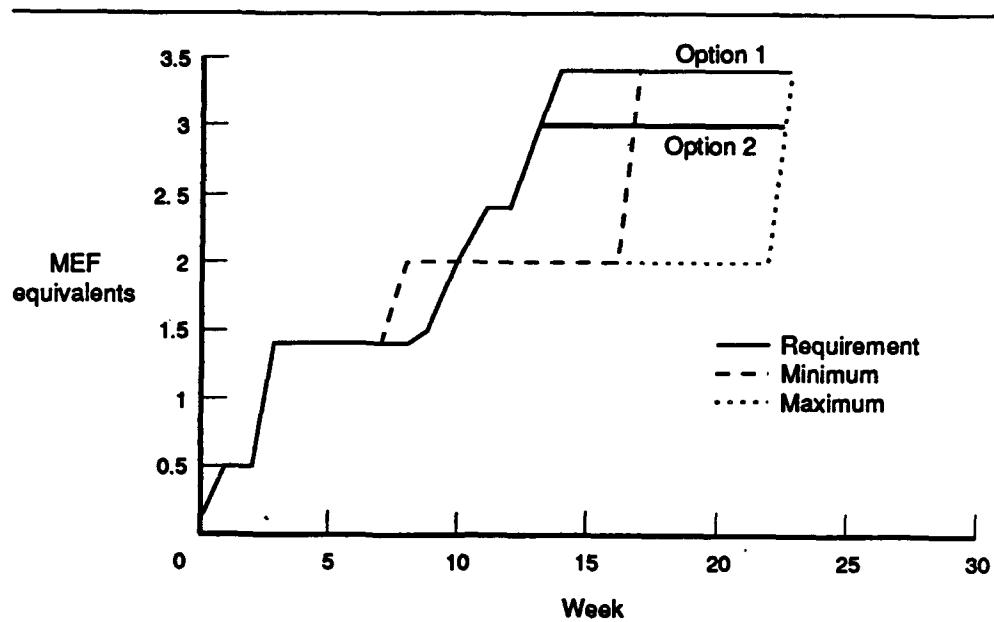


Figure 19. Response of alternatives 2/2 and 2/1.5 to MRC IV

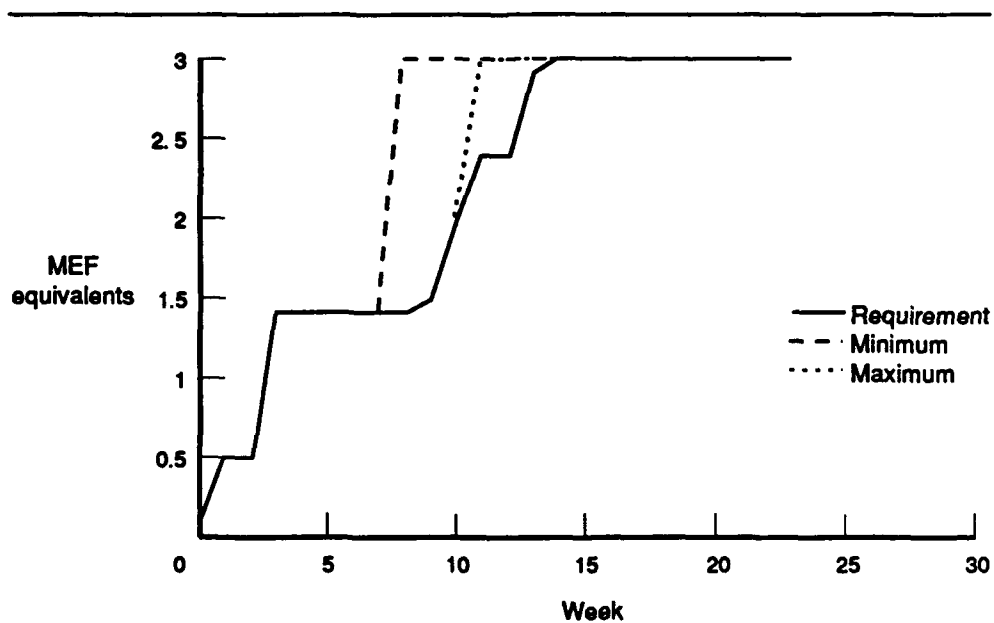


Figure 20. Response of the 2.5/0.5 alternative to MRC IV

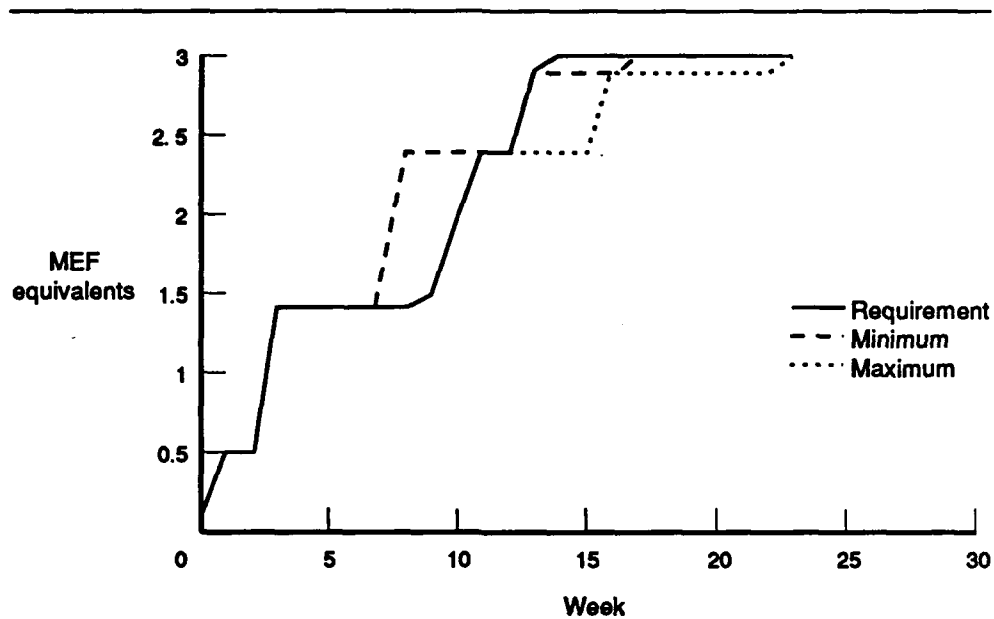


Figure 21. Response of the 2.2/0.8 alternative to MRC IV

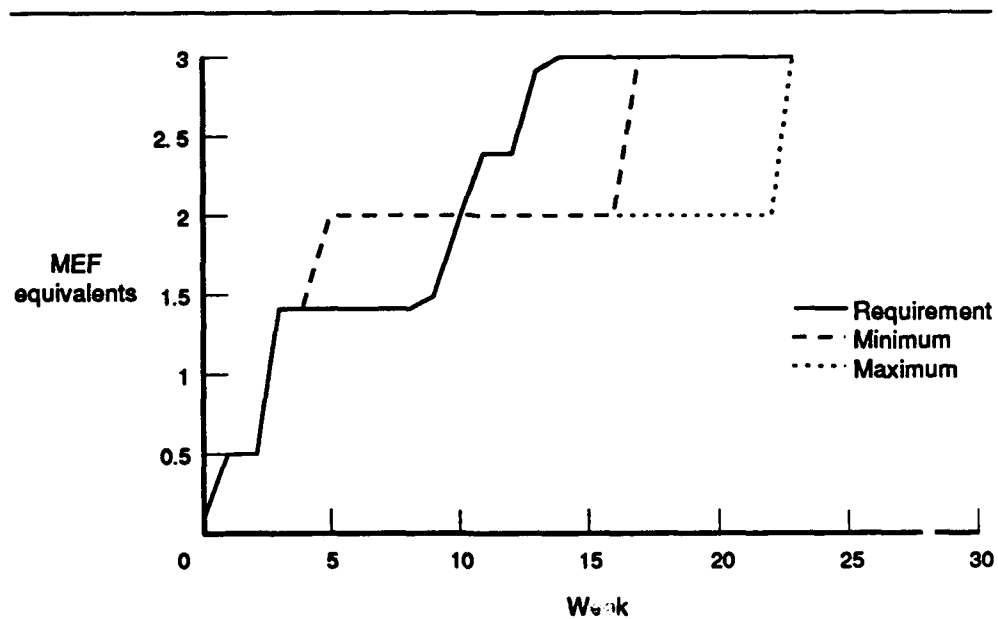


Figure 22. Response of the 2/1 alternative to MRC IV

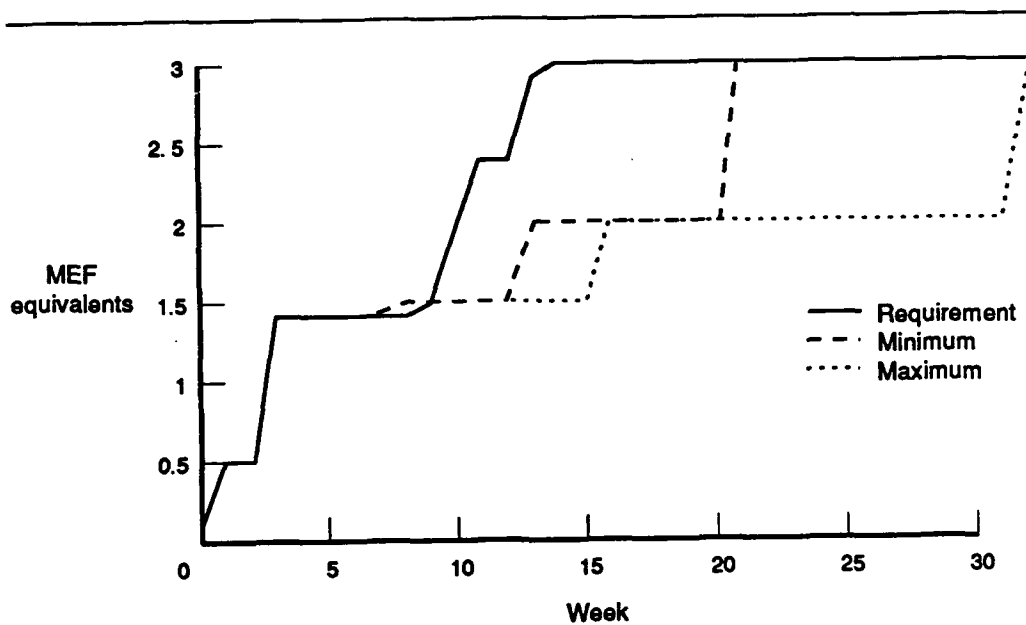


Figure 23. Response of the 1.5/1.5 alternative to MRC IV

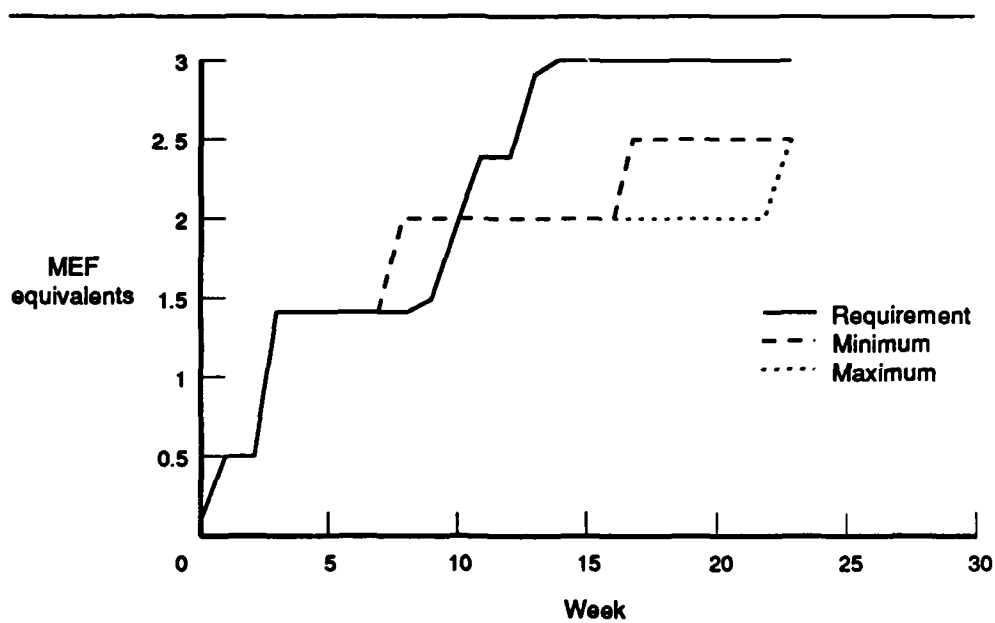


Figure 24. Response of the 2/0.5 alternative to MRC IV

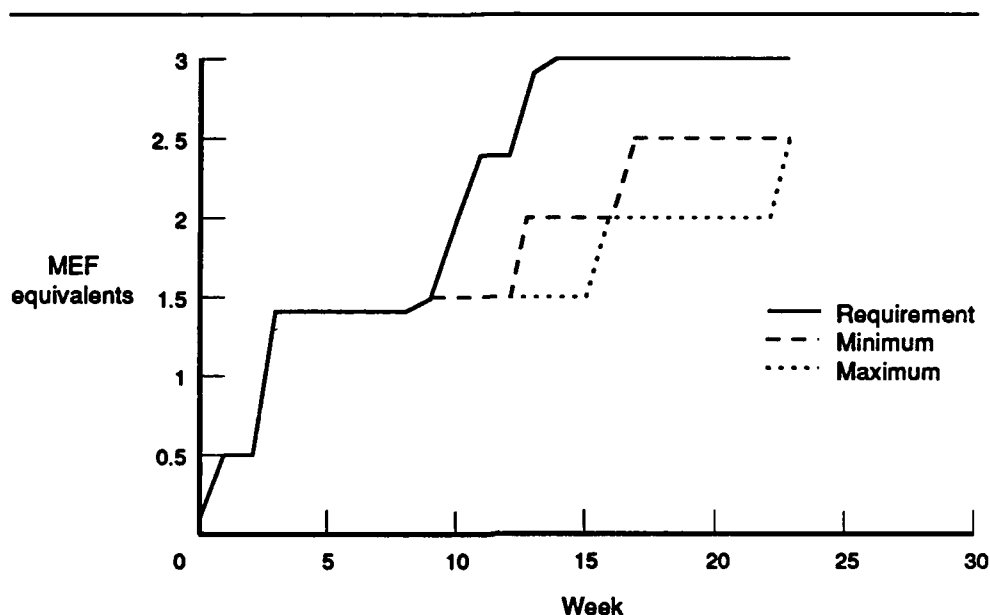


Figure 25. Response of the 1.5/1 alternative to MRC IV

Figures 6 through 11 show the alternatives' capability to react to MRC II. As in MRC I, all alternatives with 2.5 active MEFs exceed the required reaction time by three to six weeks. The minimum response time of the 2.2/0.8 alternative's DF exceeds the requirement, but the maximum response time is two weeks late. The DFs of alternatives with 2 active MEFs are three or more weeks late. Also, the 2/0.5 case is short 0.1 MEF.¹ Alternatives with 1.5 active MEFs cannot meet either the IRF or DF requirements on time, and the 1.5/1 alternative is short 0.1 MEF.

Figures 12 through 17 show each alternative's capability to react to MRC III. All alternatives with more than 2 active MEFs exceed the required reaction time. Alternatives with 2 active MEFs meet the IRF requirements on time. The minimum response times of the DFs barely meet the requirement, but their maximum response times are considerably late. Alternatives with 1.5 active MEFs cannot meet either IRF or

1. Shortages of 0.1 to 0.2 MEFs are not significant. In converting the forces in DPG scenarios to MEF equivalents, we assumed that special-operations-capable MEUs (MEUs(SOC)) would be kept separate from following MEBs so the MEUs' special-operations capabilities could be used. If those following MEBs absorb the MEUs in a process Marines call compositing, the scenario requirements decrease by 0.2 MEFs. For further details, see [9].

decisive force time lines. The 2/0.5 and 1.5/1 alternatives are short of the total force requirement by 0.5 MEF.

MRC IV is a "near simultaneous" contingency. In it, the IRF for MRC I is deployed first; the second force deployed is the IRF for MRC II. As explained in volume V [9], this scenario has two options for the total force requirement. The first option requires 3.4 MEF equivalents; the second requires 3.0. To determine the alternatives' responsiveness, we match all of the alternatives against the option that requires 3.0 MEFs, but match only those alternatives with 3.5 or 4 MEFs against the option that requires 3.4 MEFs.

Figures 18 through 25 show the ability of the alternatives to respond to MRC IV. Alternatives 2.5/1.5 and 2.5/1 (figure 18) meet the IRF requirements. Their ability to meet the requirement for the second group of forces depends on whether the total requirement is 3.0 or 3.4 MEF equivalents. If the requirement is 3.0, they meet it on time. If it is 3.4, the last 0.4 MEF equivalent is three to nine weeks late. The 2.5/0.5 alternative (figure 20) exceeds the required reaction time, but only has enough forces to respond to the option requiring 3.0 MEF equivalents.

The only other alternatives capable of responding to the 3.4-MEF option are the 2/2 and 2/1.5 alternatives (figure 19). These meet or exceed the requirements for the first two MEFs. This responsiveness uses up most of the active forces available, however. Thus, both alternatives are three to nine weeks late in getting the remaining 1 to 1.4 MEFs deployed.

The remaining force structure alternatives cannot respond to a requirement for 3.4 MEF equivalents. Thus, the rest of the discussion about MRC IV refers only to the option requiring 3.0 MEF equivalents. The 2.2/0.8 alternative (figure 21) meets or exceeds the requirement for the first 2.5 MEFs. The minimum response time for this alternative allows 0.3 MEF of the last 0.5 MEF to be met, but the remaining 0.2 MEF, which includes an infantry regiment, is three weeks late. Using maximum response times for this alternative, the last 0.5 MEF is two to nine weeks late.

Remaining alternatives with 2 active MEFs (figures 22 and 24) meet or exceed the IRF requirements for the first two MEFs. Alternatives with 1.5 active MEFs (figures 23 and 25) meet or barely exceed the requirements for the first 1.5 MEFs. None of these alternatives meets the remaining requirements, however. Two options, 2/0.5 and 1.5/1, fall 0.5 MEF short of the total force required.

Forces Remaining After Response to Contingencies

In volume II [2] of the report, we discussed the Marine Corps' worldwide commitments during Desert Shield and Desert Storm. In addition to forces in the Persian Gulf, the Marines maintained MEUs in the Mediterranean and Western Pacific plus two additional MEU-size

forces for rotation, and about the equivalent of a MEB in Okinawa (the MEB had only two infantry battalions, however).

To determine the ability of the alternative force structures to respond to similar commitments in the future, we examined the forces remaining after deploying both the IRF and DF for each MRC. The number of rotary-wing (helicopter) squadrons left after deploying forces to the MRCs turned out to be the limiting factor.¹ When building the alternatives, we used the FSPG MEF as the standard. The number of rotary-wing squadrons in the standard MEF is based on MEF missions. When smaller MAGTFs are deployed, they generally require more rotary-wing squadrons than their overall size would indicate. For example, a MEU normally has about 5 percent of a MEF's personnel but requires 13 percent of the medium- and heavy-lift helicopters. A MEB has about 35 to 40 percent of a MEF's personnel but requires half of its heavy-lift helicopters. As was the case during Desert Shield/Storm, additional commitments would probably require MAGTFs smaller than a MEF. That being the case, we used MEBs and MEUs to compute additional response capability. In so doing, we ran out of rotary-wing squadrons first.

Taking this constraint into account, we determined what other commitments the alternative force structures would meet. Although there are slight differences in alternatives with the same total number of MEFs, supportability generally depends on total force size:

- Alternatives with a total of 2.5 MEFs (2/0.5 and 1.5/1) could not support any further commitments after responding to any of the MRCs. (These alternatives do not even have enough forces for MRCs III or IV.)
- Alternatives with a total of 3 MEFs (2.5/0.5, 2.2/0.8, 2/1, and 1.5/1.5) could support either 2 MEUs or a MEB(-)² after deploying forces for MRCs I and II. They could not support further commitments after deploying forces to MRC III or option 2 of MRC IV. (These alternatives do not have enough forces for option 1 of MRC IV.)
- Alternatives with a total of 3.5 MEFs (2.5/1 and 2/1.5) could support 2 MEBs or 6 MEUs (or 1 MEB plus 3 MEUs) after deploying forces for MRC I or II. They could support 1 MEB or 3 MEUs after deploying forces for MRC III or option 2 of MRC IV. They could support no further commitments after deploying forces for option 1 of MRC IV.

1. As will be seen in the next section, for peacetime forward presence and rotation the number of available infantry battalions is the constraint. The phenomenon of constraints changing depending on the aspects being considered illustrates some of the complexity we discussed previously about building alternative force structures.

2. The (-) indicates the MEB would be short a medium-lift squadron.

- Alternatives with a total of 4 MEFs (2.5/1.5 and 2/2) could support 3 MEBs or 9 MEUs (or other combinations, "trading" 1 MEB for 3 MEUs) after deploying forces for MRC I or MRC II. They could support 2 MEBs or 6 MEUs (or other combinations) after deploying forces for MRC III or option 2 of MRC IV. They could support 1 MEB or 3 MEUs after deploying forces for option 1 of MRC IV.

These results are strictly the result of counting units. We did not consider factors such as MAGTF headquarters availability, lift availability, and response time. In practical terms, the availability of MAGTF headquarters probably would not be a problem. Even if enough forces for 9 MEUs are available, we cannot conceive of any reasonable scenario requiring response to an MRC plus deployment of 9 MEUs.

Lift and response time could be a problem, however, depending on when and where the additional forces were required. Force arrival times in all the MRC scenarios strain the available lift; additional forces might have to wait for "turnaround" shipping¹ or airlift. Response time would be subject to similar constraints--training resources would be dedicated to forces deploying for the actual contingency. Additional forces might have to wait until contingency forces deployed to get access to ranges and maneuver areas.

ACTIVE FORCE ROTATION CAPABILITY

The Marine Corps maintains forward-deployed forces supporting the peacetime forward-presence mission. Marines that deploy in the MEUs (SOC) or to Okinawa in the UDP are away from their families for at least six months at a time. Units also deploy on major JCS-directed and other exercises, decreasing the amount of time their Marines spend at home. Experience has taught the Marine Corps that if Marines spend too much time away from home, morale suffers, readiness declines, and manpower retention decreases. Having a rotation base allows the time deployed to be kept within what the Marine Corps believes are reasonable bounds. Although we did not concentrate on rotation requirements when developing the alternative force structures, the rotation capability included in each structure is important. This capability allows us to determine what kind of forward-presence posture the Marines will be able to support in the future.

We used three different methods to measure the range of rotation capability available in each alternative. For each method, the unit of measurement is the number of forward-deployed infantry battalions that can be maintained. As table 9 shows, infantry has the lowest ratio and is thus the limiting factor. Because the Base Force was used as the model for developing other alternatives, infantry is the limiting factor for all alternatives.

1. For example, once an MPS squadron is offloaded, it can be "turned around," returning to CONUS to load additional supplies and equipment.

The first rotation method is the one currently used by the Marines. Units are deployed in a ratio of one forward for every four in the force. This method does not explicitly consider other commitments, such as major exercises. The Marine Corps assumes that the other requirements can be met with this ratio. The advantage of this method is that it is known to work.

Table 9. Ratios of available to deployed units in the active DOD Base Force

Type unit	Total available	Deployed		Ratio ^a
		Okinawa	MEUs(SOC)	
Infantry Bn	16	4	2	2.7
Tank Bn	2	0	0	N/A
LAI Bn	4	0	0	N/A
Artillery Bn	8	2	0.7	3.0
LAR Co	7	1	0.7	4.2
Cbt Engr Co	7	1	0.7	4.2
AA Bn	8	1	0.7	4.8
MLR Sqdn	16	2	2	4.0
CH-53E Sqdn	6	1	0.5	4.0
AH-1/UH-1 Sqdn	6	1	< 0.5 ^b	>4.0 ^b
AV-8B Sqdn	6	1	0.6	3.8
EA-6B Sqdn	3	1	0	3.0
KC-130 Sqdn	3	1	0	3.0
F/A-18 Sqdn	11	3	0	3.7

a. Ratio is the number of units available divided by the number deployed.

b. The AH-1/UH-1 squadron has two different types of aircraft, and different fractions of these types are deployed on MEUs. We use the less-than and greater-than symbols because the percentage of AH-1s deployed is less than the percentage of UH-1s.

The second method is similar to the first, but the rotation ratio is 3.3 units for every one deployed. Under this method, a unit is deployed 6 months out of every 20. The Navy uses this ratio to plan ship deployment schedules. The Marines do not use this ratio primarily

because the Marine Corps has a smaller "sea/shore" billet ratio.¹ The Navy has about one shore billet for every billet at sea. Thus, on average, a sailor transfers to a nondeploying billet about every other tour. For the Marine Corps, the FMF/non-FMF ratio is about two to one, meaning the average Marine gets one nondeploying billet for every two deploying billets. Thus, we believe a 3.3 to 1 ratio could adversely affect morale, retention, and readiness, and use it as a minimum.

The third method is based on operating tempo (optempo). The FSPG buyback [4] indicates that an overall optempo of 45 percent is acceptable. A 45-percent optempo means a unit is away from its home station, for either deployment or major exercises, 45 percent of the time. To calculate this optempo, we used a battalion-month, defined as a full battalion deployed for one month, as the unit of measure. Three factors determine the number of battalion-months needed. The first two depend on MEU and UDP deployments; for the third, we extracted the number of battalion-months devoted to major exercises from computations in [4]:

- Maintaining a MEU deployed to the Mediterranean requires about 15 battalion-months per year. This amount of time is necessary because MEUs "turnover" in the Mediterranean Sea. There is no gap in coverage for the Mediterranean MEU.
- Western Pacific (WestPac) MEU deployments require 12 battalion-months per year. The total deployed time for those MEUs is six months, and there is a gap between the deployments. Similarly, each UDP battalion in Okinawa requires 12 battalion-months per year. The UDP battalions are flown to and from Okinawa, however, so transportation time is minimal.
- Future major exercises require 41 battalion-months per year. We extracted this number from the overall optempo computations in [4].

Maintaining the current level of deployment would require 116 battalion-months--15 for the Mediterranean MEU, 12 for the WestPac MEU, 48 for four UDP battalions, and 41 for exercise deployments. Each battalion contributes 5.4 (12×0.45) battalion-months per year, so 22 battalions would be needed to maintain this level. For alternatives with less than 22 battalions, the question becomes which requirements

1. The Marines have used a slightly lower 3 to 1 ratio in the past. Morale suffered, retention decreased, and unit readiness declined, so the practice was abandoned [4].

are filled first. We assumed the 2 MEU requirements would be filled first, then exercises, then UDP.¹

Table 10 summarizes the results of applying these three rotation methods to the ten alternatives. Two cases are shown. The first considers infantry only, the second considers infantry plus LAI battalions. This represents adding the LAI battalions to the UDP rotation.²

Table 10. Rotation capability of alternative force structures

Alternative	Infantry only			Infantry plus LAI		
	4:1	3.3:1	45 percent optempo	4:1	3.3:1	45 percent optempo
2.5/1.5	5	6	5	6	7	7
2.5/1						
2.5/0.5						
2.2/.8	4	4	3	5	6	5
2/2	3	3	2	4	4	3
2/1.5						
2/1						
2/0.5						
1.5/1.5	2	2	2	3	3	2
1.5/1						

RESERVE FORCE SUSTAINABILITY

The Marine Corps recruits large numbers of prior-service Marines for the SMCR. It believes that, to have a quality force, at least 30 percent of enlisted personnel and all of the commissioned officers³ should have prior-service experience [10]. Currently, about 40 percent

1. This sequence was chosen so that results from this method would be different from the 4 to 1 or 3.3 to 1 cases. If UDP requirements are filled before exercise requirements, the major exercise requirement does not matter because it does not get filled if there is a shortage of units.

2. Including an LAI battalion in UDP would mean that an extra LAI-battalion set of equipment would have to be bought for Okinawa. In UDP, only personnel are transported; the equipment remains in Okinawa or the home station.

3. Most warrant officers are prior service, but current policy allows them to be non-prior service.

of the enlisted and virtually all of the officers in SMCR units have prior-service experience.

RAND has the models needed to quantitatively assess the sustainability of reserve forces. We did, however, talk with recruiters about their ability to recruit prior-service Marines [11].

Currently, with about a 3-to-1 active to SMCR force level, reserve recruiters are able to meet the quotas for prior-service Marines and, in fact, are turning away some Marines who would like to join the SMCR. We asked them whether that situation would change as the relative size of active and reserve forces changed (assuming there are no changes in attitude toward military service, etc.). To provide an example, they indicated that if active forces were reduced by about a MEF and reserve force size were doubled, they could probably recruit enough prior-service Marines to maintain a 30/70 percent ratio, but *only during the transition period* when large numbers of Marines were leaving the service. Long-term, a 1-to-1 force ratio would not be enough to maintain the desired prior-service/non-prior-service ratio.

From this conversation, we developed the following four qualitative rules-of-thumb for the sustainability of active/reserve mixes:

- An active/reserve force mix of 3-to-1 or better is similar to the current situation in which prior-service Marines are being turned away, and could maintain the desired ratio.
- An active/reserve force mix between 2.5-to-1 and 3-to-1 probably will be able to maintain the desired ratio.
- An active/reserve force mix between 1.5-to-1 and 2.5-to-1 may be able to maintain the desired ratio.
- An active/reserve force mix of less than 1.5-to-1 is unlikely to be able to maintain the desired ratio.

Table 11 summarizes the results of applying these rules of thumb to the alternatives.

Table 11. Reserve force sustainability for each alternative

Alternative	Reserve force sustainability			
	Unlikely	Maybe	Probably	Undoubtedly
2.5/1.5		X		
2/2	X			
2.5/1			X	
2/1.5	X			
2.5/0.5				X
2.2/.8			X	
2/1		X		
1.5/1.5	X			
2/0.5				X
1.5/1		X		

TRANSITION COSTS

Changing the force structure incurs one-time costs as a result of activating and deactivating units. In the short term, these costs, called transition costs, may erase the expected savings from reducing force structure. Unfortunately, these costs are difficult to compute, particularly for large structure changes. Major changes may include costs associated with base closings, such as environmental cleanup, and savings associated with the sale of property. Furthermore, there may be one-time separation pay for individuals and costs associated with the disposal or decommissioning of equipment.

Computing accurate transition costs is difficult unless a specific plan is available. The only data we have on transition costs are from a CNA study that computed the transition costs of transferring two specific types of active units to the reserve: an infantry battalion and a helicopter squadron [12].¹ We used these costs as models for ground battalions and aviation squadrons, respectively, to develop estimates of the transition costs of the alternative force structures (cost data were converted to FY 1993 dollars). The costs in [12], however, assume only small changes in the overall force structure; major costs such as those associated with base closings and separation pay are not included. Because of these uncertainties, the costs displayed in this section should be considered only order-of-magnitude estimates.

As a first step, we determined the differences between the alternatives and the current (FY 1993) force structure. We converted all

1. Staff officers from MARRESFOR told us they still use [12] as a guide, and have found the computed costs to be accurate.

ground-unit differences (which include ground units in the ACE, such as air defense battalions) to battalion equivalents (e.g., using three companies as the equivalent of a battalion). Flying-unit differences were all computed in terms of squadron equivalents.

Table 12 summarizes the differences between the FY 1993 force and each of the alternatives for ground units. For all alternatives, the active Marine Corps decreases in size, with net deactivations ranging between 2.6 to 66.6 battalion equivalents. The effect on the SMCR varies from the net deactivation of 32 battalion equivalents (in the 2.5/0.5 case) to the net activation of 39.2 battalion equivalents (in the 2/2 case).

Table 12. Ground unit activations/deactivations for each alternative (in battalion equivalents)

Alternative	<u>Activation</u>		<u>Deactivation</u>		<u>Net effect</u>	
	Active	Reserve	Active	Reserve	Active	Reserve
2.5/1.5	10.4	18.1	13.0	0.3	-2.6	17.8
2/2	5.4	39.2	40.7	0.0	-35.3	39.2
2.5/1	10.4	6.2	13.0	7.8	-2.6	-1.6
2/1.5	5.4	22.5	40.7	0.0	-35.3	22.5
2.5/.5	10.4	4.8	13.0	36.8	-2.6	-32.0
2.2/.8	5.7	5.7	26.4	12.8	-20.7	-7.1
2/1	5.4	6.3	40.7	12.5	-35.3	-6.2
1.5/1.5	4.3	23.3	70.9	1.7	-66.6	21.6
2/.5	5.4	2.3	40.7	33.4	-35.3	-31.1
1.5/1	4.3	6.3	70.9	13.2	-66.6	-6.9

Table 13 summarizes these differences for aircraft units. As with ground units, the active Marine Corps decreases in all cases, with net deactivations ranging from 1 to 20 squadron equivalents. The effect on the SMCR varies from the deactivation of 1 squadron equivalent to the activation of 30 squadron equivalents.

Building on the work previously done at CNA, we developed order-of-magnitude estimates for the activation and deactivation costs of active and reserve ground and air units. We generated these estimates for battalion and squadron equivalents in 1983 dollars and then adjusted them to 1993 dollars. Table 14 presents the estimates for active and reserve ground and air units. Although we list these estimates to the nearest \$0.1 million, we have done so merely to prevent the propagation of large rounding errors. These costs are order-of-magnitude estimates (and we round them to the nearest \$10 million in the final results to reflect this fact).

Table 13. Aircraft squadron activations/deactivations for each alternative (in squadron equivalents)

Alternative	<u>Activation</u>		<u>Deactivation</u>		<u>Net effect</u>	
	Active	Reserve	Active	Reserve	Active	Reserve
2.5/1.5	4	23	5	1	-1	22
2/2	2	31	11	1	-9	30
2.5/1	4	4	5	4	-1	0
2/1.5	2	18	11	1	-9	17
2.5/.5	4	4	5	5	-1	-1
2.2/.8	2	4	7	4	-5	0
2/1	2	8	11	1	-9	7
1.5/1.5	0	19	20	0	-20	19
2/.5	2	2	11	3	-9	-1
1.5/1	0	8	20	2	-20	6

Table 14. Transition costs estimates (in 1993 dollars)

	<u>Activation</u>	<u>Deactivation</u>
	<u>(\$M)</u>	<u>(\$M)</u>
Active		
Battalion equivalents	22.8	1.8
Squadron equivalents	10.5	0.7
Reserve		
Battalion equivalents	20.0	0.1
Squadron equivalents	9.9	0.5

Applying the cost factors in table 14 to the numbers of units activated and deactivated from tables 12 and 13, we estimated transition costs for each alternative. These estimates are given in table 15. They range from a low of \$300 million for the 2/0.5 alternative, which entails reductions in both active and reserve forces, to \$1,320 million for the 2/2 alternative, which entails major structure transfers from active to reserve forces.

Table 15. Transition costs for alternative force structures

Alternative	Estimated transition cost (\$ million) ^a	Difference from DOD Base Force
2.5/1.5	900	540
2/2	1,320	960
2.5/1	470	110
2/1.5	850	490
2.5/.5	450	90
2.2/.8	360	0
2/1	430	70
1.5/1.5	890	530
2/.5	300	-60
1.5/1	450	90

a. Rounded to the nearest \$10 million.

OTHER FACTORS

Up to this point, we have focused on the FMF and the SMCR, which are the principal combat organizations of the Marine Corps. Here, we discuss the composition of non-FMF components, which include the supporting establishment (e.g., management headquarters, bases and stations, and training commands) and other operating forces such as Marine security guards. In addition, we compute the total number of Marines in each alternative force structure and discuss the role of the other component of the Ready Reserve--the Individual Ready Reserve.

Non-FMF Structure

To determine the total number of Marines in each alternative force structure, we have to determine the size of the non-FMF for each alternative. Appendix C lists the current structure of the non-FMF. To determine the non-FMF manning, we used the FSPG results [4] as a starting point. The FSPG estimated the future non-FMF manning to be about 41,000 Marines. We adjusted this figure as follows:

- We subtracted active-duty support to the SMCR and computed the level of active-duty support for each alternative separately.
- We added the ACE "overhead." These Marines are listed on the ACE portion of the FMF troop list, but they are not part of the MEFs.

- We added the FMF headquarters and support personnel. When we developed alternative force structures, we included only units within the MEFs.
- For the alternatives with 1.5 active MEFs, we assumed that the bases in Japan and Okinawa would be closed. It would be difficult to maintain forces at these bases because there would be no rotation capability.

Making these adjustments, the starting point for the non-FMF is 43,200 Marines. For alternatives with 1.5 active MEFs, the starting point is 41,900.

Next, we computed the active-duty support for each alternative's SMCR component. Using data obtained from [13], we determined the average percentage of active-duty support in each major subordinate element of the SMCR. We assumed that future SMCR alternatives maintain the same percentages of active-duty support (I&Is and regular Marines filling billets in reserve units). These percentages are as follows:

- Six percent for the CE
- Eight percent for the GCE
- Twenty-eight percent for the ACE
- Eight percent for the CSSE.

Once we had determined the total FMF and non-FMF manning, we added the Marine Corps "overhead," which consists of prisoners, patients, transients, and trainees (P2T2). Historically, P2T2 averages about 15 percent of the total active force.

In addition, we applied two adjustments to the SMCR components of each alternative. First, we added 2,600 individual mobilization augmentees (IMAs). The RFSPG [6] planned for this number of IMAs for all alternatives considered; thus, we assumed it to be a constant regardless of other SMCR structure. Second, we computed the number of full-time support (FTS) personnel in the SMCR. FTS personnel make up about 6 percent of current SMCR unit structure [13] and of the RFSPG alternatives. Although they are a component of SMCR structure, however, they are *not added* to the SMCR unit structures. Because FTS reservists cost more than drilling reservists, we list their costs separately. We display SMCR structure as IMAs, drilling units, and FTS personnel.

Table 16 summarizes the manning for each alternative's active and reserve components. Manning for the active FMF is 90 percent of the FMF structure generated for each alternative. Remember that, in developing the alternatives, we used unit structure rather than manning. Although average manning is 90 percent of structure, this percentage varies from unit to unit. Thus, structure is a more convenient measure. For the

Table 16. Manning for the alternative forces (in thousands)

	Alternatives									
	2.5/ 1.5	2/2	2.5/1	2/1.5	0.5	2.2/ 0.8 ^a	2/1	1.5/ 1.5	2/ 0.5	1.5/ 1
Active forces										
Active FMF manning	100.8	80.3	100.8	80.3	100.8	90.0	80.3	60.6	80.3	60.6
Active non-FMF manning	43.2	43.2	43.2	43.2	43.2	42.1	43.2	41.9	43.2	41.9
Active-duty SMCR support	9.2	11.6	5.4	8.8	3.4	3.7 ^b	5.9	8.7	3.1	5.9
P2T2	27.0	23.9	26.4	23.3	26.0	23.3	22.9	19.6	22.3	19.1
Total active force manning	180.2	159.0	175.8	155.6	173.4	159.1	152.3	130.8	148.9	127.5
SMCR forces										
Drilling units	56.6	74.6	36.9	56.2	19.2	30.2 ^c	37.0	56.4	19.3	38.0
FTS	3.6	4.8	2.4	3.6	1.2	2.1	2.4	3.6	1.2	2.4
IMAs	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Total SMCR manning	62.8	82.0	41.9	62.4	23.0	34.9	42.0	62.6	23.1	43.0

a. Values for this alternative were derived from [4] and [6], not computed.

b. The RFSPG lists active-duty support, but we think the number given is low (e.g., no active-duty support was listed for CE units, although they currently have 6 percent active-duty personnel).

c. This alternative includes initial active-duty training personnel and "pool" personnel that have not been assigned to units.

DOD Base Force (2.2/0.8 alternative), we have the specific force structure plan. Thus, the structure breakdown in table 16 reflects that plan, not a computed force structure.

Role of the Individual Ready Reserve (IRR)

The IRR has two main roles: providing pre-assigned personnel (PIRR) to augment nondeploying units, and providing individual replacements to units that have suffered casualties. PIRRs fill "holes" in base and station personnel rosters when fleet assistant program (FAP) personnel return to deploying units, and provide the additional personnel that non-FMF units need during wartime. Retirees also fill requirements for pre-trained individual manpower (PIM) in non-FMF units. Table 17 shows the current requirements and number of billets filled by PIRRs and pre-assigned retirees [14].

Table 17. Pre-assigned PIM requirements

Category	Required	Filled	Percent filled
PIRR	6,225	5,900	95
Retired	1,973	1,889	96
Total	8,198	7,789	95

For PIRRs and pre-assigned retirees to perform their mission successfully, the Marine Corps must be able to activate them early in a conflict. Before Desert Shield and Storm, mobilization planners assumed that, for a major contingency, partial mobilization would occur shortly after a selective callup. During Desert Shield, however, partial mobilization did not occur until five months after the first increment of the selective callup. Although the Marines were able to use IMAs and volunteers from the IRR and Retired Reserve, they were not able to fill all the necessary billets. Also, using volunteers created problems when they volunteered for a billet other than the one to which they were pre-assigned (see [2]). To increase the usefulness of pre-assignees, some means of activating them early (either legislative or a policy change) should be enacted.

The other role of the IRR is to provide replacements. Currently, the Marine Corps has over 65,000¹ IRRs. Most of them have a remaining service obligation. Because of those obligations, even IRRs who are unlikely to be activated are kept on the rolls. Almost 10 percent of

1. On 23 July 1992, there were 65,466 IRRs [14].

the IRRs (6,364) carry reenlistment codes of 3 or 4 (RE3 or RE4). There are eleven different variations of RE3 and RE4, including hardship discharge, failure to complete recruit training, failure to meet physical standards, drug abuse, and so on. Marines with such problems are unlikely to be fit for service [15].

Subtracting RE3s, RE4s, and PIRRs leaves about 53,000 individual replacements. These Marines, plus any active-duty Marines stripped out of the non-FMF, are the only trained personnel available to fill units and replace combat losses. In a protracted conflict, they would be the "band-aid bridge" until additional personnel could either be recruited or drafted and then trained.

The longer an IRR has been off active duty, the more likely his skills are to have atrophied. Thus, those who have been off active duty the least time would be mobilized first, and would need the least post-mobilization training.¹ Table 18 shows the distribution of IRRs by recency of active service [14]. Generally, about 30 percent have been off active duty less than a year, about 30 percent have been off for one to two years, and the rest have been off for over two years.

Table 18. Distribution of IRR by recency of active service

Time off active duty	Number of personnel	Percentage of IRR
Less than one year	19,903	30
One to two years	20,645	32
Two to three years	10,260	16
Over three years	14,658	22
Total	65,466	

1. During the Persian Gulf conflict, the criteria for selecting IRRs for activation were proper MOS/grade and recency of active service. The general consensus from [15] and from submissions to the Marine Corps Lessons Learned System was that IRRs who have been away from active duty for more than a year need MOS refresher training in addition to any other post-mobilization training (such as desert warfare or combat refresher training).

Currently, IRRs are used for individual replacement. They are assigned either individually or in groups to existing units. This policy provides maximum flexibility. During Desert Shield/Storm, the Marine Corps formed IRRs (and active-duty Marines from the non-FMF) into organizations called casualty replacement companies (CRCs). Each CRC had a mix of MOSs and grades the Marines thought would be needed to replace combat losses. CRCs were not intended to be used as units in combat. They were formed to provide convenient "packages" for training, transportation, and administration. Personnel were to be pulled out of CRCs as needed and assigned to units that suffered casualties.

STEADY-STATE COSTS

Several authors have addressed the question of relative active and reserve unit costs [12, 16]. Force structure costs can be divided into four groups: direct unit costs, direct support costs, infrastructure costs, and transition costs. Transition costs have already been examined. In this section, we specifically address direct unit costs and, to a lesser degree, support and infrastructure costs. All costs are provided in FY 1993 dollars.

We have no direct data on support or infrastructure other than the number of personnel that are not in FMF or SMCR units, so we use those personnel to scale the costs. Except for the 1.5-active-MEF alternatives, support and infrastructure costs other than personnel costs should be about the same because the alternatives do not change the support structure. For the 1.5-active-MEF alternatives, closing bases and stations in Okinawa and Japan would result in additional savings beyond our computed cost differences. As shown below, those two alternatives are already the least expensive, so the additional savings would not change their standing relative to other alternatives.

Direct Unit Costs

To compute direct unit steady-state costs, we used a procedure similar to that used to compute transition costs. We convert all ground units (which include ground units in the ACE, such as air defense battalions) to battalion equivalents (e.g., we use three companies as the equivalent of a battalion). We list all flying units in squadron equivalents. Table 19 summarizes the size of each alternative in battalion and squadron equivalents.

Table 20 summarizes direct unit costs for four types of units [16]. We used the average of infantry and tank battalion costs as a

model for ground battalions¹ and the helicopter squadron cost as a model for flying squadrons. Although we list these estimates to the nearest \$0.1 million, we have done so merely to prevent the propagation of large rounding errors. As with transition costs, these are order-of-magnitude estimates, and we round them to the nearest \$100 million in the final results to reflect this fact.

Table 19. Size of each alternative force structures (in battalion and squadron equivalents)

Alternative	Active		Reserve	
	Battalion	Squadron	Battalion	Squadron
2.5/1.5	115.5	59	62.8	37
2/2	82.8	51	84.2	45
2.5/1	115.5	59	43.4	15
2/1.5	82.8	51	67.5	32
2.5/.5	115.5	59	13.0	14
2.2/.8	97.4	55	37.9	15
2/1	82.8	51	38.8	22
1.5/1.5	51.5	40	66.6	34
2/.5	82.8	51	13.9	14
1.5/1	51.5	40	38.1	21

Table 20. Direct unit costs (in millions of FY 1993 dollars)

Type of unit	Active	SMCR
Battalion equivalents	39.2	14.8
Squadron equivalents	27.4	19.7

Other Personnel Costs

FMF and SMCR units do not account for all the personnel in the total force. To the previous calculations, we added the active-duty

1. An infantry unit has a lot of people but not much equipment, and a tank unit has a lot of equipment but not many people. Combining the two provides a reasonable model of average personnel and equipment operating costs for ground units.

non-FMF, reserve IMAs, and reserve FTS personnel not assigned to units.¹ Table 16 shows the numbers of personnel in these categories. We obtained estimates for the average cost of active-duty personnel from [17]. To determine cost per active-duty Marine, we computed a weighted average of \$33 thousand per non-FMF Marine from the Marine officer and enlisted averaged sustainment costs.² To calculate the cost of IMAs, we assumed a drilling reservist costs one-twelfth as much as an active-duty Marine [6].

Total Steady-State Cost

Table 21 summarizes the annual steady-state cost estimates for each alternative. They range from a low of \$6.1 billion for the 1.5/1 alternative to \$10.1 billion for the 2.5/1.5 alternative.

Table 21. Steady-state costs for alternative force structures (in billions of FY 1993 dollars)

Alternative	Total ^a	Difference from DOD Base Force
2.5/1.5	10.1	1.7
2/2	9.0	0.6
2.5/1	9.4	1.0
2/1.5	8.5	0.1
2.5/.5	8.9	0.5
2.2/.8	8.4	0
2/1	7.8	-0.6 ^b
1.5/1.5	6.8	-1.6
2/.5	7.3	-1.1
1.5/1	6.1	-2.3

a. The totals do not include all of the infrastructure and support costs.

b. Negative values indicate the alternative costs less than the DOD Base Force.

1. Currently, about 30 percent of FTS reservists are not assigned to SMCR units [6]. We assumed this percentage would apply to all alternatives. Thus, we added 30 percent of the FTS personnel cost to each alternative.

2. The FY 1993 non-FMF (which includes non-FMF structure from appendix C plus aviation training and support from the ACE troop list) is about 15 percent officers and 85 percent enlisted Marines.

SUMMARY AND INTERPRETATION OF RESULTS

Table 22 summarizes the results of this analysis. In the table, we identify each alternative force structure by the number of war-strength active/reserve MEFs it can support. This number is followed by the total number of active and SMCR personnel. The table lists response to MRCs as the number of weeks early (positive value) or late (negative value) an alternative can deploy the required force. It gives a range of values, representing the minimum and maximum response times. Footnotes explain particular shortcomings (e.g., that the alternative cannot get the IRF deployed in time or that it does not have the total forces needed for a contingency).¹

In the next section of the table, we address the computed rotation capability for the three methods used. We give two values for each method. The first is based on infantry only; the second assumes that both infantry and LAI battalions are included in the rotation scheme. Sustainability addresses our qualitative assessment of an alternative's capability to maintain the desired 30 percent prior-service Marines in the SMCR.²

Table 22 provides two sets of costs. The first is the one-time transition cost associated with changing the force structure. The second is the long-term cost differences between the DOD Base Force and the alternative.

We can make a number of observations from examining the table. For example, the total numbers of active and SMCR personnel are almost constant within groups of alternatives having the same total number of MEFs. Slight variations within a group are due to differences in active-duty support to the SMCR and P2T2.

MRC RESPONSE

Perhaps the most important aspect of the alternatives is response to the MRCs. Only the 4-MEF and 3.5-MEF alternatives can respond fully to option 1 of MRC IV, which requires 3.4 MEFs. None of the alternatives can fully meet the time lines for that option, but the 2.5-active-MEF alternatives come closest. These alternatives would have the best chance of meeting commitments outside the specific contingencies because of their larger total force structures. That is, once forces deployed to the contingencies, enough forces would remain to deploy a MEB or larger force elsewhere.

1. As discussed earlier, a shortage of 0.2 MEFs or less is insignificant. Thus, only alternatives that fall short of the stated requirement by a MEB (about 0.4 MEF) or more are noted.

2. RAND is performing a quantitative analysis of sustainability.

Table 22. Summary of alternative force structures.

Alternative	Personnel (1,000s)		Response to MRCs (weeks early (+)/late (-)) ^a				
	Active	SMCR	Total	I	II	III	IV option 1 IV option 2
4 MEFs							
2.5/1.5	180	63	243	+5 to +8	+3 to +6	+6 to +9	-3 to -9 ^b +3 to +6
2/2	159	82	241	-1 to -7 ^c	-3 to -9	0 to -6	-3 to -9 ^d -3 to -9 ^e
3.5 MEFs							
2.5/1	176	42	218	+5 to +8	+3 to +6	+6 to +9	-3 to -9 ^b +3 to +6
2/1.5	156	62	218	+1 to -7	-3 to -9	0 to -6	-3 to -9 ^d -3 to -9 ^e
3 MEFs							
2.5/0.5	173	23	196	+5 to +8	+3 to +6	+6 to +9	N/A +3 to +6
2.2/0.8	159	35	194	+3 to 0	+1 to -2 ^f	+1 to +4	N/A -3 to -9 ^g
2/1	152	42	194	-1 to -7	-3 to -9	0 to -6	N/A -3 to -9 ^e
1.5/1.5	131	63	194	-1 to -7 ^c	-3 to -9 ^h	0 to -6 ^h	N/A -7 to -18
2.5 MEFs							
2/0.5	149	23	172	-1 to -7	-3 to -9	0 to -6 ⁱ	N/A -3 to -9 ^{d,i}
1.5/1	128	43	171	-1 to -7 ^c	-3 to -9 ^h	0 to -6 ^{h,i}	N/A -3 to -9 ⁱ

a. Unless otherwise noted, alternatives can deploy the IRF on time. Time-early or -late refers to the DF for MRCs I, II and III, and to the IRF for the second contingency for MRC IV. The range of arrival times provided represents the difference in minimum and maximum time required to deploy the force.

b. Three-quarters of the IRF for the second contingency arrives on time.

c. Half of the DF arrives on time.

d. A quarter of the IRF for the second contingency arrives on time.

e. A third of the IRF for the second contingency arrives on time.

f. Two-thirds of the DF arrives on time.

g. Two-thirds of the IRF for the second contingency arrives on time.

h. With this alternative, the IRF cannot arrive on time.

i. This alternative falls short of the force required by a MEB or more.

Table 22. (Continued)

Alternative	Rotation capability (battalions) ^j			30-percent SMCR prior-service sustainability	Transition costs ^l (\$ millions)		Long-term cost difference from DOD base force (\$ millions)
	4 to 1	3.3 to 1	45-percent optempo		Net	Difference from DOD base force	
4 MEFs							
2.5/1.5	5/6	6/7	5/7	Maybe	890	530	1,700
2/2	3/4	3/4	2/3	Unlikely	1,310	950	600
3.5 MEFs							
2.5/1	5/6	6/7	5/7	Probably	460	100	1,000
2/1.5	3/4	3/4	2/3	Unlikely	850	490	100
3 MEFs							
2.5/0.5	5/6	6/7	5/7	Undoubtedly	440	80	500
2.2/0.8	4/5	4/6	3/5	Probably	360	0	0
2/1	3/4	3/4	2/3	Maybe	450	90	-600 ^m
1.5/1.5 ^k	2	2	2	Unlikely	890	530	-1,600
2.5 MEFs							
2/0.5	3/4	3/4	2/3	Undoubtedly	320	-40 ^m	-1,100
1.5/1 ^k	2	2	2	Maybe	450	90	-2,300

j. The two values represent rotation capability with infantry battalions only and infantry plus LAI battalions. Infantry plus LAI would involve LAI battalions in the UDP program, which would require purchase of an additional battalion set of equipment for Okinawa (except for the alternatives with 1.5 active MEFs, for which we assume Okinawa is closed).

k. Rotation capability is for infantry battalions only. We assume that Okinawa is closed for these alternatives, so including LAI battalions in the rotation base is irrelevant.

l. These are order-of-magnitude estimates.

m. Negative value indicates transition cost would be lower than that for the DOD Base Force.

For option 2 of MRC IV and the other MRCs, the alternatives with 2.5 active MEFs exceed the timing requirements by 3 to 9 weeks. These alternatives have enough active forces to meet the initial requirements and allow reservists to be integrated at company or battalion level in the following forces. Thus, these alternatives provide the National Command Authority with a degree of flexibility in terms of when reserve forces have to be activated to meet the time lines.

The 2.2/0.8 alternative (the DOD Base Force) meets the timing requirements for all contingencies except MRC IV (and, in the worst case, this alternative is two weeks late getting the DF to MRC II). This option provides little flexibility, however. In the best case, this alternative provides four weeks of flexibility for MRC III. For the other contingencies, reserves would need to be activated early.

None of the alternatives with 2 or fewer active MEFs meet all the timing requirements for the DF in MRCs I, II, and III, or for initial response to the second contingency in MRC IV. All alternatives with 2 active MEFs do, however, meet the IRF requirements. Alternatives with 1.5 active MEFs cannot meet the IRF requirements for MRCs II and III.

Alternatives with a total force of 2.5 MEFs do not have sufficient forces to respond to MRCs III and IV. Those alternatives are 0.1 MEF short for MRC II, but we do not consider this a true shortage. We assumed that MEUs would not be absorbed in following MEBs for all MRCs except MRC IV; simply changing that assumption allows the 2.5-MEF alternatives to meet the requirements for MRC II. Alternatives with 2.5 MEFs would have no ability to meet other commitments once their forces are deployed to any MRC.

PEACETIME PRESENCE

Peacetime forward-presence and rotation capability are a function of active forces. The more active MEFs an alternative has, the more rotation capability it has. All alternatives are capable of maintaining two forward-deployed MEUs. Then, as active force size increases, the ability to maintain additional forward-presence forces elsewhere increases proportionately.

SUSTAINABILITY

Sustainability of reserve forces is defined as the predicted ability to maintain 30 percent prior-service Marines in the SMCR (for enlisted; under current Marine Corps policy, all officers must be prior-service Marines). According to our qualitative estimates, the 2.5/1, 2.5/0.5, 2.2/0.8, and 2/0.5 alternatives should be able to maintain the desired level of prior-service Marines in the SMCR. Other alternatives may not be able to do so; if not, the Marine Corps policy, particularly for officers, may have to be changed.

COSTS

Transition costs depend on how large a difference exists between the current (FY 1993) force and the alternatives. It is less expensive to deactivate units than to activate them, so the alternatives with fewer forces generally have lower transition costs. This is not true in all cases, however. Alternatives with 1.5 MEFs in the SMCR require a large number of units to be activated in the reserves. Thus, even when large numbers of active forces are being deactivated (as in the 1.5/1.5 case), transferring many of those forces to the reserves results in large transition costs.

Steady-state costs depend on total force size and the active-reserve split. Alternative force structures with a higher proportion of reserve forces are generally the least expensive. In some cases, alternatives with more total forces cost less than smaller alternatives with a higher proportion of active-duty forces. For example, although the 2/1.5 alternative has 0.5 MEF more in the total force than the 2.5/.5 alternative, it costs less because of its higher proportion of reserve forces.

CHOOSING AN ALTERNATIVE

Which alternative force structure is best depends on the relative importance of the above factors to the decision-maker. If the ability to respond to contingencies and have some forces left over for other commitments or to meet unexpected crises is important, the alternatives with 3.5 or 4 MEFs in the total force provide the best capability. Alternatives with 4 MEFs are generally the most expensive and are also the most risky in terms of reserve force sustainability. Alternatives with 3.5 MEFs provide a good compromise. They can respond to an MRC and still have at least a MEB left for all contingencies except option 1 of MRC IV. Even for MRC IV, however, the 3.5-MEF alternatives provide a degree of flexibility. To retain a Marine force to respond to some unforeseen crisis, these alternatives can execute option 2 of MRC IV. If responding to a crisis is less important than getting the largest force to the contingency, option 1 can be executed. Of the 3.5-MEF alternatives, 2.5/1 provides the fastest response capability and is the least risky in terms of reserve force sustainability.

If the ability to meet contingency requirements on time is important, the alternatives with 2.5 active MEFs are best. Of these alternatives, the 2.5/0.5 alternative is the least expensive, but it cannot execute option 1 of MRC IV. Furthermore, that alternative has no forces to respond to other commitments after deploying forces to MRC III or IV. The 2.5/1 alternative has the same response times as the 2.5/0.5 alternative and would have forces to meet other commitments after MRC response. The 2.2/0.8 option is next closest to meeting the timing requirements, but it provides less flexibility than the 2.5-MEF alternatives and cannot meet the timing requirements of MRC IV. If reserve activation is delayed even for a short time (for both the Korean and

Persian Gulf Wars the delay was about three weeks), the 2.2/0.8 alternative might not be able to respond on time to the other MRCs.

If meeting the IRF requirement is more important than delivering the DF on time, alternatives with 2 active MEFs can do so at less cost than alternatives with 2.5 or 2.2 active MEFs. For MRC IV, however, Marine forces are the IRFs to two concurrent (near simultaneous) contingencies. Alternatives with 2 active MEFs cannot deliver the IRF to the second contingency in time.

If the ability to maintain peacetime forward presence is important, which alternative is best depends on how much forward presence is needed in the future. Alternatives with 2.5 active MEFs can maintain the current levels. If a smaller presence is acceptable, alternatives with 2 active MEFs can maintain 2 or 3 MEUs plus limited presence elsewhere. If the future requirement is reduced to just 2 MEUs, alternatives with 1.5 active MEFs can maintain forward presence.

If short-term transition costs are important, alternatives that are either close to the current structure or reduce both active and reserve forces are least expensive. The 2.5/0.5 alternative has the lowest transition cost, followed by the 2.2/0.8, 2.5/0.5, 2/1, 1.5/1, and 2.5/1 alternatives.

If long-term costs are important, alternatives with a larger proportion of reserve forces or smaller total force are least expensive. This is not surprising; generally, more capability costs more. The alternatives with a total of 2.5 MEFs are the least expensive, but they also have the least capability. They could only respond to MRC I or MRC II (not on time), but the response would require the entire force.

Alternatives with a total of 3 MEFs have enough forces to respond to all MRCs except option 1 of MRC IV, at a price commensurate with their capability. The least expensive of these is the 1.5/1.5 alternative, which costs about \$1.6 billion less than the DOD Base Force. This alternative is also the least capable of the 3-MEF alternatives. It cannot meet the time lines for any MRC, and cannot even meet the IRF requirements for MRCs II and III. For about \$0.6 billion less than the Base Force, the 2/1 alternative can at least meet the IRF requirements (except the IRF requirement for the second contingency in MRC IV), but this alternative cannot meet the time lines for delivering the DF for any contingency except MRC III, and then only in the best case. The only 3-MEF alternative that can meet the time lines for all MRCs is the 2.5/0.5 option, which is the most expensive of the 3-MEF alternatives at about \$0.5 billion more than the Base Force.

For almost the same cost as the DOD Base Force (\$0.1 billion more), the 2/1.5 alternative offers a larger total force. This alternative has the same shortfalls in meeting the DF time lines as the 2/1 alternative, however. Furthermore, this force probably could not sustain the prior-service goal for the SMCR. The 2.5/1 alternative offers the same total

force size, ability to respond to all MRCs on time (except option 1 of MRC IV), sustainability, and additional forces for crises or other commitments after deployment to an MRC. This additional capability costs about \$1 billion more than the Base Force.

The 4-MEF alternatives offer the largest total force of all. The 2/2 alternative is the least expensive of these, at \$0.6 billion more than the DOD Base Force. This alternative is basically a more unwieldy version of the 2/1.5 alternative--it costs more, cannot meet the DF time lines, and is even less likely to be able to sustain the 30 percent prior-service goal. The 2.5/1.5 alternative solves the DF timing shortfalls, may be able to sustain the prior-service goal, and has forces left over even after responding to option 1 of MRC IV. This alternative, however, is the most expensive of all, at \$1.7 billion more than the Base Force.

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APPENDIX A
DETAILED FORCE STRUCTURES FOR THE ALTERNATIVES

APPENDIX A

DETAILED FORCE STRUCTURES FOR THE ALTERNATIVES

Tables A-1 through A-10 give a detailed breakdown of the active and reserve force structures for each alternative. Each of these tables contains a detailed breakdown of units in the major subordinate elements in a MEF. For both the active and reserve component of each alternative, the tables include the following:

- The total number of each type unit
- The total number of personnel that would be in those units at wartime strength (their "structure")
- The net change, in number of units, from the FY 1993 force structure.

These tables present all units as standard teams, platoons, companies, squadrons, or battalions. When less than a full unit is included in an alternative, it is listed as a fraction of that unit type. Specific task organizations such as the Combat Support Group or Support Battalion included in the DOD Base Force plan are not listed separately. They are depicted as fractional parts of standard units.

The total structure of these alternatives may not match the structure of specific plans such as the FSPG/RFSPG reports or current Marine Corps troop lists. There are two reasons for this. First, plans are dynamic and often change. We used versions of the active and reserve troop lists to determine unit strengths, but those strengths may change as plans develop. For example, the SMCR unit strengths differ from the RFSPG because the available SMCR troop list did not match the RFSPG unit strengths. Second, these alternatives are not intended to prescribe plans for the structure of the Marine Corps; they were used to determine the numbers of different types of units that might be included in the various alternatives.

Table A-1. Detailed breakdown of the active and reserve structures for the 2.5/1.5 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	1	315	0
MEU CE	6	336	0	0	0	0
Hq, SRIG	3	153	0.17	1	51	1
H&S Bn	3	696	0.17	1	232	1
Intelligence Co	3	21	0.17	1	7	1
SCAMP	3	138	0	1	46	0
CI Team	12	192	0	4	64	3
Topographic Platoon	3	141	0	1	47	0
FIIU	3	189	0	1	19	0
Int Platoon	3	165	0.5	1	11	0
FORECONCO	2.2	350	-0.1	2	318	0
ANGLICO	2	496	0	2	496	0
UAV Co	3	390	0	1	74	1
H&S Co, Communi- cation Bn	3	651	0	1	217	0
GS Co	3	786	0	1	262	0
DS Co	8	1,072	2	4	536	3
Service Co	3	1,164	3	1	388	0
H&S Co, Radio Bn	2.5	780	0.5	0.5	156	0.5
Radio Co	5	620	0	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		9,246			3,566	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	7	1,897	-2	2	540	0
Reconnaissance Co	7	644	0	2	184	-1
Infantry Bn	20	18,580	-4	8	7,432	0

Table A-1. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	3	1,026	0	1	342	0
DS Artillery Bn	9	6,678	-2	4	2,964	-1
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	1	439	1
Combat Engineer Bn	3	1,935	0	1	879	0
Hq Co, Combined Arms Regt	2	542	2	2	540	1
Tank Bn	2	1,580	0	2	1,650	0
LAR Co	2	296	-1	2	290	1
LAI Bn	4	3,328	4	4	3,716	4
AAV Bn	2.5	2,860	0.09	2	1,852	1
LAR Bn	3	2,634	0.2	1	846	0
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	3	183	0.17	1	60	0
MP Co	3	213	0.13	1	71	0
Service Co	3	354	0	1	118	0
Communication Co	3	993	0	1	329	0
Truck Co	3	705	0	1	233	0
SSC Team	3	36	0	1	12	1
Division Band	3	153	1	0	0	0
Ground combat element total		45,967			23,775	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	3	336	0.24	1.5	191	0.5
Ordnance Maintenance Co	3	660	0.04	1.5	330	0.5
MT Maintenance Co	3	1,038	0.07	1.5	417	0.5
Engineer Maintenance Co	3	645	0.11	1.5	309	0.5
Electronic Maintenance Co	3	885	0.06	1.5	462	0.5
GS Maintenance Co	3	744	0.1	1.5	431	0.5

Table A-1. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	3	660	0.05	1	244	0
Supply Co	3	1,869	0.12	1	598	0
Ammunition Co	3	921	0	1	276	0
Medical logistics Co	3	57	0	1	19	0
H&S Co, Engineer Support Bn	3	840	0.12	1	272	0
Engineer Support Co	3	1,587	0.22	1	375	0
Bridge Co	3	270	0.5	2	180	1
Bulk Fuel Co	3	570	0.5	1	261	0
Engineer Co	9	1,269	0	3	390	0
H&S Co, Landing Support Bn	3	282	0	1	177	0
Landing Support Equipment Co	3	513	0.09	1	267	0
B&T Operations Co	3	606	0.27	1	255	0
Landing Support Co	9	612	0	3	204	0
H&S Co, MT Bn	3	786	0.04	1	246	0
MT GS Co	3	1,182	0.06	1	359	0
MT DS Co	6	1,050	0	3	453	1
H&S Co, Medical Bn	3	132	0.4	1	111	0
Medical Co (Surg)	6	168	0	2	56	0
Medical Co (C&C)	12	216	0	4	64	0
H&S Co, Dental Bn	3	15	0	1	5	0
Dental Co	9	0	9	3	0	3
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	3	1,530	0.15	1	481	0
Communication Co	3	1,062	0.29	1	371	0
MP Co	3	405	0.33	1	148	0
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		22,395			10,855	

Table A-1. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Aviation combat element</u>						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	1	40	0
MWCS	3	1,218	0	1	544	0
MACS	3	996	-2	1	377	0
Hq, MATCS	3	72	0	1	24	0
Det, MATCS	6	456	-5	2	150	0
MASS	3	669	0	1	234	0
Marine Air Defense Bn	2	1,958	0	2	1,958	1
H&HS, MWSG	3	153	0	1	50	0
MWSS (FW)	5	3,505	0	3	2,046	1
MWSS (RW)	4	2,516	-2	4	2,440	2
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	5	485	0	3	291	1
MALS (FW)	5	1,800	0	3	1,035	1
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	3	867	3
VMFA	10	2,420	0	7	1,694	1
Hq, Marine Air Group (RW)	5	485	-1	3	291	1
MALS (RW)	5	1,690	-1	3	888	1
HMH	6	2,010	-3	3	1,005	2
HMM	18	3,474	3	15	2,895	13
HMLA	6	2,694	0	6	2,694	4
Aggressor Squadron	0	0	0	1	32	0
VMGR	3	972	0	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		34,444			22,024	
All elements total		112,052			60,220	

Table A-2. Detailed breakdown of the active and reserve structures for the 2/2 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	1	315	0
MEU CE	6	336	0	0	0	0
Hq, SRIG	2	102	-0.83	2	102	2
H&S Bn	2.2	510	-0.63	2	464	2
Intelligence Co	2.2	15	-0.63	2	14	2
SCAMP	2.2	101	-0.8	2	92	1
CI Team	10	160	-2	6	96	5
Topographic Platoon	2.2	103	-0.8	2	94	1
FIU	2.2	139	-0.8	2	38	1
Int Platoon	2.2	121	-0.3	2	22	1
FORECONCO	2.2	350	-0.1	2	318	0
ANGLICO	2	496	0	2	496	0
UAV Co	2	260	-1	2	148	2
H&S Co, Communi- cation Bn	2.6	564	-0.4	1.4	304	0.4
GF Co	2.5	655	-0.5	2	524	1
DS Co	8	1,072	2	5	670	4
Service Co	2.6	1,009	2.6	1.4	543	0.4
H&S Co, Radio Bn	2	624	0	0.5	156	0.5
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		8,020			4,723	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	4	1,084	-5	4	1,080	2
Reconnaissance Co	4	368	-3	4	368	1
Infantry Bn	12	11,148	-12	14	13,006	6

Table A-2. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	2.5	855	-0.5	2	684	1
DS Artillery Bn	7	5,194	-4	5	3,705	0
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	1	439	1
Combat Engineer Bn	2.33	1,503	-0.67	2	1,758	1
Hq Co, Combined Arms Regt	2	542	2	2	540	1
Tank Bn	2	1,580	0	2	1,650	0
LAR Co	2	296	-1	2	290	1
LAI Bn	4	3,328	4	4	3,716	4
AAV Bn	2	2,288	-0.41	2	1,852	1
LAR Bn	2	1,756	-0.8	2	1,692	1
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	2.8	171	-0.03	1.2	72	0.2
MP Co	2.8	199	-0.07	1.2	85	0.2
Service Co	2.8	330	-0.2	1.2	142	0.2
Communication Co	2.8	927	-0.2	1.2	395	0.2
Truck Co	2.8	658	-0.2	1.2	280	0.2
SSC Team	2.8	34	-0.2	1.2	14	1.2
Division Band	2.8	143	0.8	0	0	0
Ground combat element total		33,733			33,046	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	2.5	280	-0.26	1.5	191	0.5
Ordnance Maintenance Co	2.5	550	-0.46	1.5	330	0.5
MT Maintenance Co	2.5	865	-0.43	1.5	417	0.5
Engineer Maintenance Co	2.5	538	-0.39	1.5	309	0.5
Electronic Maintenance Co	2.5	738	-0.44	1.5	462	0.5
GS Maintenance Co	2.5	620	-0.4	1.5	431	0.5

Table A-2. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	2.5	550	-0.45	1.5	366	0.5
Supply Co	2.5	1,558	-0.38	1.5	897	0.5
Ammunition Co	2.5	768	-0.5	1.5	414	0.5
Medical Logistics Co	2.5	48	-0.5	1.5	29	0.5
H&S Co, Engineer Support Bn	2.3	644	-0.58	1.7	462	0.7
Engineer Support Co	2.3	1,217	-0.48	1.7	638	0.7
Bridge Co	2.3	207	-0.2	2	180	1
Bulk Fuel Co	2.3	437	-0.2	2	522	1
Engineer Co	7	987	-2	5	650	2
H&S Co, Landing Support Bn	2	188	-1	2	354	1
Landing Support Equipment Co	2	342	-0.91	2	534	1
B&T Operations Co	2	404	-0.73	2	510	1
Landing Support Co	6	408	-3	6	408	3
H&S Co, MT Bn	2.3	603	-0.66	2	492	1
MT GS Co	2.3	906	-0.64	2	718	1
MT DS Co	5	875	-1	4	604	2
H&S Co, Medical Bn	2.2	97	-0.4	2	222	1
Medical Co (Surg)	5	140	-1	3	84	1
Medical Co (C&C)	9	162	-3	7	112	3
H&S Co, Dental Bn	2.3	12	-0.7	2	10	1
Dental Co	7	0	7	5	0	5
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	2.6	1,326	-0.25	1.4	673	0.4
Communication Co	2.6	920	-0.11	1.4	519	0.4
MP Co	2.6	351	-0.07	1.4	207	0.4
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		18,223			14,648	

Table A-2. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Aviation combat element</u>						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	1	40	0
MWCS	2.5	1,015	-0.5	1.5	816	0.5
MACS	2.5	830	-2.5	1.5	566	0.5
Hq, MATCS	2.2	53	-0.8	2	48	1
Det, MATCS	4.4	334	-6.6	4	300	2
MASS	2.5	558	-0.5	1.5	351	0.5
Marine Air Defense Bn	2	1,958	0	2	1,958	1
H&HS, MWSG	3	153	0	1	50	0
MWSS (FW)	4	2,804	-1	4	2,728	2
MWSS (RW)	3	1,887	-3	5	3,050	3
MWSS (Base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	4	388	-1	4	388	2
MALS (FW)	4	1,440	-1	4	1,380	2
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	4	1,156	4
VMFA	6	1,452	-4	12	2,904	6
Hq, Marine Air Group (RW)	4	388	-2	4	388	2
MALS (RW)	4	1,352	-2	4	1,184	2
HMH	4	1,340	-5	4	1,340	3
HMM	16	3,088	1	16	3,088	14
HMLA	6	2,694	0	6	2,694	4
Aggressor Squadron	0	0	0	1	32	0
VMGR	2	648	-1	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		29,253			26,940	
All elements total		89,228			79,357	

Table A-3. Detailed breakdown of the active and reserve structures for the 2.5/1 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	0.5	158	-0.5
MEU CE	6	336	0	0	0	0
Hq, SRIG	3	153	0.17	0	0	0
H&S Bn	3	696	0.17	0	0	0
Intelligence Co	3	21	0.17	1	7	1
SCAMP	3	138	0	1	46	0
CI Team	12	192	0	2	32	1
Topographic Platoon	3	141	0	1	47	0
FIIU	3	189	0	1	19	0
Int Platoon	3	165	0.5	1	11	0
FORECONCO	2.2	350	-0.1	2	318	0
ANGLICO	2	496	0	2	496	0
UAV Co	3	390	0	1	74	1
H&S Co, Communi- cation Bn	3	651	0	0.5	109	-0.5
GS Co	3	786	0	1	262	0
DS Co	8	1,072	2	2	268	1
Service Co	3	1,164	3	0.5	194	-0.5
H&S Co, Radio Bn	2.5	780	0.5	0.5	156	0.5
Radio Co	5	620	0	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		9,246			2,523	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	7	1,897	-2	1	270	-1
Reconnaissance Co	7	644	0	1	92	-2
Infantry Bn	20	18,580	-4	4	3,716	-4

Table A-3. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	3	1,026	0	1	342	0
DS Artillery Bn	9	6,678	-2	3	2,225	-2
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	1	439	1
Combat Engineer Bn	3	1,935	0	1	879	0
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	2	1,580	0	2	1,650	0
LAR Co	2	296	-1	1	145	0
LAI Bn	4	3,328	4	2	1,858	2
AAV Bn	2.5	2,860	0.09	1	926	0
LAR Bn	3	2,634	0.2	1	846	0
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	3	183	0.17	1	60	0
MP Co	3	213	0.13	1	71	0
Service Co	3	354	0	1	118	0
Communication Co	3	993	0	1	329	0
Truck Co	3	705	0	1	233	0
SSC Team	3	36	0	1	12	1
Division Band	3	153	1	0	0	0
Ground combat element total		45,967			15,757	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	3	336	0.24	1	127	0
Ordnance Maintenance Co	3	660	0.04	1	220	0
MT Maintenance Co	3	1,038	0.07	1	278	0
Engineer Maintenance Co	3	645	0.11	1	206	0
Electronic Maintenance Co	3	885	0.06	1	308	0
GS Maintenance Co	3	744	0.1	1	287	0

Table A-3. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	3	660	0.05	1	244	0
Supply Co	3	1,869	0.12	1	598	0
Ammunition Co	3	921	0	1	276	0
Medical Logistics Co	3	57	0	1	19	0
H&S Co, Engineer Support Bn	3	840	0.12	1	272	0
Engineer Support Co	3	1,587	0.22	1	375	0
Bridge Co	3	270	0.5	1	90	0
Bulk Fuel Co	3	570	0.5	1	261	0
Engineer Co	9	1,269	0	2	260	-1
H&S Co, Landing Support Bn	3	282	0	1	177	0
Landing Support Equipment Co	3	513	0.09	1	267	0
B&T Operations Co	3	606	0.27	1	255	0
Landing Support Co	9	612	0	2	136	-1
H&S Co, MT Bn	3	786	0.04	1	246	0
MT GS Co	3	1,182	0.06	1	359	0
MT DS Co	6	1,050	0	1	151	-1
H&S Co, Medical Bn	3	132	0.4	1	111	0
Medical Co (Surg)	6	168	0	1	28	-1
Medical Co (C&C)	12	216	0	2	32	-2
H&S Co, Dental Bn	3	15	0	1	5	0
Dental Co	9	0	9	2	0	2
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	3	1,530	0.15	1	481	0
Communication Co	3	1,062	0.29	1	371	0
MP Co	3	405	0.33	1	148	0
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		22,395			9,492	

Table A-3. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Aviation combat element</u>						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	1	40	0
MWCS	3	1,218	0	1	544	0
MACS	3	996	-2	1	377	0
Hq, MATCS	3	72	0	1	24	0
Det, MATCS	6	456	-5	1	75	-1
MASS	3	669	0	1	234	0
Marine Air Defense Bn	2	1,958	0	1	979	0
H&HS, MWSG	3	153	0	1	50	0
MWSS (FW)	5	3,505	0	1	682	-1
MWSS (RW)	4	2,516	-2	2	1,220	0
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	5	485	0	2	194	0
MALS (FW)	5	1,800	0	2	690	0
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	0	0	0
VMFA	10	2,420	0	4	968	-2
Hq, Marine Air Group (RW)	5	485	-1	2	194	0
MALS (RW)	5	1,690	-1	2	592	0
HMH	6	2,010	-3	0	0	-1
HMM	18	3,474	3	6	1,158	4
HMLA	6	2,694	0	2	898	0
Aggressor Squadron	0	0	0	1	32	0
VMGR	3	972	0	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		34,444			11,430	
All elements total		112,052			39,202	

Table A-4. Detailed breakdown of the active and reserve structures for the 2/1.5 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	1	315	0
MEU CE	6	336	0	0	0	0
Hq, SRIG	2	102	-0.83	1	51	1
H&S Bn	2.2	510	-0.63	1	232	1
Intelligence Co	2.2	15	-0.63	1	7	1
SCAMP	2.2	101	-0.8	1	46	0
CI Team	10	160	-2	4	64	3
Topographic Platoon	2.2	103	-0.8	1	47	0
FIIU	2.2	139	-0.8	1	19	0
Int Platoon	2.2	121	-0.3	1	11	0
FORECONCO	2.2	350	-0.1	2	318	0
ANGLICO	2	496	0	2	496	0
UAV Co	2	260	-1	2	148	2
H&S Co, Communi- cation Bn	2.6	564	-0.4	1	217	0
GS Co	2.5	655	-0.5	1	262	0
DS Co	8	1,072	2	3	402	2
Service Co	2.6	1,009	2.6	1	388	0
H&S Co, Radio Bn	2	624	0	0.5	156	0.5
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		8,020			3,506	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	4	1,084	-5	3	810	1
Reconnaissance Co	4	368	-3	3	276	0
Infantry Bn	12	11,148	-12	9	8,361	1

Table A-4. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	2.5	855	-0.5	1	342	0
DS Artillery Bn	7	5,194	-4	4	2,964	-1
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	1	439	1
Combat Engineer Bn	2.33	1,503	-0.67	1.5	1,319	0.5
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	2	1,580	0	2	1,650	0
LAR Co	2	296	-1	1	145	0
LAI Bn	4	3,328	4	3	2,787	3
AAV Bn	2	2,288	-0.41	2	1,852	1
LAR Bn	2	1,756	-0.8	2	1,692	1
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	2.8	171	-0.03	1	60	0
MP Co	2.8	199	-0.07	1	71	0
Service Co	2.8	330	-0.2	1	118	0
Communication Co	2.8	927	-0.2	1	329	0
Truck Co	2.8	658	-0.2	1	233	0
SSC Team	2.8	34	-0.2	1	12	1
Division Band	2.8	143	0.8	0	0	0
Ground combat element total		33,733			25,008	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	2.5	280	-0.26	1.5	191	0.5
Ordnance Maintenance Co	2.5	550	-0.46	1.5	330	0.5
MT Maintenance Co	2.5	865	-0.43	1.5	417	0.5
Engineer Maintenance Co	2.5	538	-0.39	1.5	309	0.5
Electronic Maintenance Co	2.5	738	-0.44	1.5	462	0.5
GS Maintenance Co	2.5	620	-0.4	1.5	431	0.5

Table A-4. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	2.5	550	-0.45	1	244	0
Supply Co	2.5	1,558	-0.38	1	598	0
Ammunition Co	2.5	768	-0.5	1	276	0
Medical Logistics Co	2.5	48	-0.5	1	19	0
H&S Co, Engineer Support Bn	2.3	644	-0.58	1	272	0
Engineer Support Co	2.3	1,217	-0.48	1	375	0
Bridge Co	2.3	207	-0.2	2	180	1
Bulk Fuel Co	2.3	437	-0.2	1	261	0
Engineer Co	7	987	-2	4	520	1
H&S Co, Landing Support Bn	2	188	-1	1	177	0
Landing Support Equipment Co	2	342	-0.91	1	267	0
B&T Operations Co	2	404	-0.73	1	255	0
Landing Support Co	6	408	-3	3	204	0
H&S Co, MT Bn	2.3	603	-0.66	1	246	0
MT GS Co	2.3	906	-0.64	1	359	0
MT DS Co	5	875	-1	3	453	1
H&S Co, Medical Bn	2.2	97	-0.4	1	111	0
Medical Co (Surg)	5	140	-1	2	56	0
Medical Co (C&C)	9	162	-3	5	80	1
H&S Co, Dental Bn	2.3	12	-0.7	1	5	0
Dental Co	7	0	7	3	0	3
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	2.6	1,326	-0.25	1	481	0
Communication Co	2.6	920	-0.11	1	371	0
MP Co	2.6	351	-0.07	1	148	0
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		18,223			11,001	

Table A-4. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Aviation combat element</u>						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	1	40	0
MWCS	2.5	1,015	-0.5	1	544	0
MACS	2.5	830	-2.5	1	377	0
Hq, MATCS	2.2	53	-0.8	2	48	1
Det, MATCS	4.4	334	-6.6	3	225	1
MASS	2.5	558	-0.5	1	234	0
Marine Air Defense Bn	2	1,958	0	1	979	0
H&HS, MWSG	3	153	0	1	50	0
MWSS (FW)	4	2,804	-1	4	2,728	2
MWSS (RW)	3	1,887	-3	4	2,440	2
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	4	388	-1	3	291	1
MALS (FW)	4	1,440	-1	3	1,035	1
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	1	289	1
VMFA	6	1,452	-4	9	2,178	3
Hq, Marine Air Group (RW)	4	388	-2	3	291	1
MALS (RW)	4	1,352	-2	3	888	1
HMH	4	1,340	-5	3	1,005	2
HMM	16	3,088	1	12	2,316	10
HMLA	6	2,694	0	4	1,796	2
Aggressor Squadron	0	0	0	1	32	0
VMGR	2	648	-1	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		29,253			20,265	
All elements total		89,228			59,780	

Table A-5. Detailed breakdown of the active and reserve structures for the 2.5/0.5 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	0	0	-1
MEU CE	6	336	0	0	0	0
Hq, SRIG	3	153	0.17	0	0	0
H&S Bn	3	696	0.17	0	0	0
Intelligence Co	3	21	0.17	0	0	0
SCAMP	3	138	0	0	0	-1
CI Team	12	192	0	0	0	-1
Topographic Platoon	3	141	0	0	0	-1
FIIU	3	189	0	0	0	-1
Int Platoon	3	165	0.5	0	0	-1
FORECONCO	2.2	350	-0.1	1	159	-1
ANGLICO	2	496	0	1	248	-1
UAV Co	3	390	0	0	0	0
H&S Co, Communi- cation Bn	3	651	0	0	0	-1
GS Co	3	786	0	0	0	-1
DS Co	8	1,072	2	1	134	0
Service Co	3	1,164	3	0	0	-1
H&S Co, Radio Bn	2.5	780	0.5	0.5	156	0.5
Radio Co	5	620	0	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		9,246			1,024	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	7	1,897	-2	0	0	-2
Reconnaissance Co	7	644	0	0	0	-3
Infantry Bn	20	18,580	-4	0	0	-8

Table A-5. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	3	1,026	0	0	0	-1
DS Artillery Bn	9	6,678	-2	1	741	-4
DS Artillery Bn (augmented)	0	0	0	0	0	0
MLRS Bn	1	439	0.67	0.29	127	0.29
Combat Engineer Bn	3	1,935	0	0	0	-1
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	2	1,580	0	1	825	-1
LAR Co	2	296	-1	1	145	0
LAI Bn	4	3,328	4	2	1,858	2
AAV Bn	2.5	2,860	0.09	0.5	463	-0.5
LAR Bn	3	2,634	0.2	0	0	-1
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	3	183	0.17	1	60	0
MP Co	3	213	0.13	0	0	-1
Service Co	3	354	0	0	0	-1
Communication Co	3	993	0	0	0	-1
Truck Co	3	705	0	0	0	-1
SSC Team	3	36	0	0	0	0
Division Band	3	153	1	0	0	0
Ground combat element total		45,967			4,748	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	3	336	0.24	0.5	64	-0.5
Ordnance Maintenance Co	3	660	0.04	0.5	110	-0.5
MT Maintenance Co	3	1,038	0.07	0.5	139	-0.5
Engineer Maintenance Co	3	645	0.11	0.5	103	-0.5
Electronic Maintenance Co	3	885	0.06	0.5	154	-0.5
GS Maintenance Co	3	744	0.1	0.5	144	-0.5

Table A-5. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	3	660	0.05	0.5	122	-0.5
Supply Co	3	1,869	0.12	0.5	299	-0.5
Ammunition Co	3	921	0	0.5	138	-0.5
Medical Logistics Co	3	57	0	0.5	10	-0.5
H&S Co, Engineer Support Bn	3	840	0.12	0.5	136	-0.5
Engineer Support Co	3	1,587	0.22	0.5	188	-0.5
Bridge Co	3	270	0.5	0.5	45	-0.5
Bulk Fuel Co	3	570	0.5	0.5	131	-0.5
Engineer Co	9	1,269	0	1	130	-2
H&S Co, Landing Support Bn	3	282	0	0	0	-1
Landing Support Equipment Co	3	513	0.09	0	0	-1
B&T Operations Co	3	606	0.27	0	0	-1
Landing Support Co	9	612	0	0	0	-3
H&S Co, MT Bn	3	786	0.04	0.5	123	-0.5
MT GS Co	3	1,182	0.06	0.5	180	-0.5
MT DS Co	6	1,050	0	1	151	-1
H&S Co, Medical Bn	3	132	0.4	0.5	56	-0.5
Medical Co (Surg)	6	168	0	1	28	-1
Medical Co (C&C)	12	216	0	2	32	-2
H&S Co, Dental Bn	3	15	0	0.5	3	-0.5
Dental Co	9	0	9	1	0	1
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	3	1,530	0.15	0.5	241	-0.5
Communication Co	3	1,062	0.29	0.5	186	-0.5
MP Co	3	405	0.33	0.5	74	-0.5
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		22,395			5,886	

Table A-5. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Aviation combat element</u>						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	0	0	-1
MWCS	3	1,218	0	0	0	-1
MACS	3	996	-2	0	0	-1
Hq, MATCS	3	72	0	0	0	-1
Det, MATCS	6	456	-5	0	0	-2
MASS	3	669	0	0	0	-1
Marine Air Defense Bn	2	1,958	0	1	979	0
H&HS, MWSG	3	153	0	0	0	-1
MWSS (FW)	5	3,505	0	1	682	-1
MWSS (RW)	4	2,516	-2	2	1,220	0
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	5	485	0	1	97	-1
MALS (FW)	5	1,800	0	1	345	-1
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	0	0	0
VMFA	10	2,420	0	2	484	-4
Hq, Marine Air Group (RW)	5	485	-1	1	97	-1
MALS (RW)	5	1,690	-1	1	296	-1
HMH	6	2,010	-3	0	0	-1
HMM	18	3,474	3	6	1,158	4
HMLA	6	2,694	0	2	898	0
Aggressor Squadron	0	0	0	1	32	0
VMGR	3	972	0	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		34,444			8,767	
All elements total		112,052			20,425	

Table A-6. Detailed breakdown of the active and reserve structures for the 2.2/0.8 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	0.5	158	-0.5
MEU CE	6	336	0	0	0	0
Hq, SRIG	2	102	-0.83	1	51	1
H&S Bn	2.5	580	-0.33	1	232	1
Intelligence Co	2.2	15	-0.63	1	7	1
SCAMP	2.2	101	-0.8	1	46	0
CI Team	10	160	-2	1	16	0
Topographic Platoon	2.2	103	-0.8	1	47	0
FIIU	2.2	139	-0.8	1	19	0
Int Platoon	2.2	121	-0.3	0	0	-1
FORECONCO	2.2	350	-0.1	1	159	-1
ANGLICO	2	496	0	2	496	0
UAV Co	2	260	-1	1	74	1
H&S Co, Communication Bn	2.6	564	-0.4	1	217	0
GS Co	2.5	655	-0.5	1	262	0
DS Co	8	1,072	2	1	134	0
Service Co	2.6	1,009	2.6	1	388	0
H&S Co, Radio Bn	2	624	0	0	0	0
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element Total		8,089			2,633	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	6	1,626	-3	1	270	-1
Reconnaissance Co	6	552	-1	1	92	-2
Infantry Bn	16	14,864	-8	2	1,858	-6

Table A-6. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	2.9	992	-0.1	1	342	0
DS Artillery Bn	7.5	5,565	-3.5	3	2,223	-2
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	0	0	0
Combat Engineer Bn	2.33	1,503	-0.67	1	879	0
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	2	1,580	0	1	825	-1
LAR Co	2	296	-1	1	145	0
LAI Bn	4	3,328	4	2	1,858	2
AAV Bn	2	2,288	-0.41	1	926	0
LAR Bn	2.3	2,019	-0.5	1	846	0
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	2.8	171	-0.03	1	60	0
MP Co	2.8	199	-0.07	1	71	0
Service Co	2.8	330	-0.2	1	118	0
Communication Co	2.8	927	-0.2	1	329	0
Truck Co	2.8	658	-0.2	1	233	0
SSC Team	2.8	34	-0.2	1	12	1
Division Band	2.8	143	0.8	0	0	0
Ground combat element total		38,946			12,635	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	2.7	302	-0.06	1	127	0
Ordnance Maintenance Co	2.7	594	-0.26	1	220	0
MT Maintenance Co	2.7	934	-0.23	1	278	0
Engineer Maintenance Co	2.7	581	-0.19	1	206	0
Electronic Maintenance Co	2.7	797	-0.24	1	308	0
GS Maintenance Co	2.7	670	-0.2	1	287	0

Table A-6. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	2.7	594	-0.25	1	244	0
Supply Co	2.7	1,682	-0.18	1	598	0
Ammunition Co	2.7	829	-0.3	1	276	0
Medical Logistics Co	2.7	51	-0.3	1	19	0
H&S Co, Engineer Support Bn	2.5	700	-0.38	1	272	0
Engineer Support Co	2.5	1,323	-0.28	1	375	0
Bridge Co	2.5	225	0	1	90	0
Bulk Fuel Co	2.5	475	0	1	261	0
Engineer Co	8	1,128	-1	3	390	0
H&S Co, Landing Support Bn	2.2	207	-0.8	1	177	0
Landing Support Equipment Co	2.2	376	-0.71	1	267	0
B&T Operations Co	2.2	444	-0.53	1	255	0
Landing Support Co	7	476	-2	2	136	-1
H&S Co, MT Bn	2.3	603	-0.66	1	246	0
MT GS Co	2.3	906	-0.64	1	359	0
MT DS Co	5	875	-1	2	302	0
H&S Co, Medical Bn	2.2	97	-0.4	1	111	0
Medical Co (Surg)	5	140	-1	2	56	0
Medical Co (C&C)	9	162	-3	4	64	0
H&S Co, Dental Bn	2.3	12	-0.7	1	5	0
Dental Co	7	0	7	3	0	3
H&S Co, H&S Bn	2.6	1,287	-0.31	1	532	0
Service Co	2.6	1,326	-0.25	1	481	0
Communication Co	2.6	920	-0.11	1	371	0
MP Co	2.6	351	-0.07	1	148	0
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		19,066			9,833	

Table A-6. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Aviation combat element						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	1	40	0
MWCS	3	1,218	0	1	544	0
MACS	3	996	-2	1	377	0
Hq, MATCS	2.3	55	-0.7	1	24	0
Det, MATCS	4.6	350	-6.4	2	150	0
MASS	3	669	0	1	234	0
Marine Air Defense Bn	2	1,958	0	1	979	0
H&HS, MWSG	3	153	0	1	50	0
MWSS (FW)	4	2,804	-1	1	682	-1
MWSS (RW)	4	2,516	-2	1	610	-1
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	4	388	-1	2	194	0
MALS (FW)	4	1,440	-1	1	345	-1
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	0	0	0
VMFA	8	1,936	-2	4	968	-2
Hq, Marine Air Group (RW)	5	485	-1	2	194	0
MALS (RW)	5	1,690	-1	1	296	-1
HMH	6	2,010	-3	0	0	-1
HMM	16	3,088	1	6	1,158	4
HMLA	6	2,694	0	2	898	0
Aggressor Squadron	0	0	0	1	32	0
VMGR	3	972	0	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		32,293			10,254	
All elements total		98,394			35,355	

Table A-7. Detailed breakdown of the active and reserve structures for the 2/1 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	0.5	158	-0.5
MEU CE	6	336	0	0	0	0
Hq, SRIG	2	102	-0.83	0	0	0
H&S Bn	2.2	510	-0.63	0	0	0
Intelligence Co	2.2	15	-0.63	1	7	1
SCAMP	2.2	101	-0.8	1	46	0
CI Team	10	160	-2	2	32	1
Topographic Platoon	2.2	103	-0.8	1	47	0
FIU	2.2	139	-0.8	1	19	0
Int Platoon	2.2	121	-0.3	1	11	0
FORECONCO	2.2	350	-0.1	1	159	-1
ANGLICO	2	496	0	1	248	-1
UAV Co	2	260	-1	1	74	1
H&S Co, Communi- cation Bn	2.6	564	-0.4	0.4	87	-0.6
GS Co	2.5	655	-0.5	1	262	0
DS Co	8	1,072	2	1	134	0
Service Co	2.6	1,009	2.6	0.4	155	-0.6
H&S Co, Radio Bn	2	624	0	1	312	1
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		8,020			2,078	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	4	1,084	-5	2	540	0
Reconnaissance Co	4	368	-3	2	184	-1
Infantry Bn	12	11,148	-12	7	6,503	-1

Table A-7. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	2.5	855	-0.5	0.5	171	-0.5
DS Artillery Bn	7	5,194	-4	1	741	-4
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	0.29	127	0.29
Combat Engineer Bn	2.33	1,503	-0.67	1	879	0
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	2	1,580	0	1	825	-1
LAR Co	2	296	-1	1	145	0
LAI Bn	4	3,328	4	2	1,858	2
AAV Bn	2	2,288	-0.41	1	926	0
LAR Bn	2	1,756	-0.8	1	846	0
Division Hq	3	691	0.05	1	259	0
Hq Co, H&S Bn	2.8	171	-0.03	1	60	0
MP Co	2.8	199	-0.07	0.2	14	-0.8
Service Co	2.8	330	-0.2	0.2	24	-0.8
Communication Co	2.8	927	-0.2	0.2	66	-0.8
Truck Co	2.8	658	-0.2	0.2	47	-0.8
SSC Team	2.8	34	-0.2	1	12	1
Division Band	2.8	143	0.8	0	0	0
Ground combat element total		33,733			15,516	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	2.5	280	-0.26	0.5	64	-0.5
Ordnance Maintenance Co	2.5	550	-0.46	0.5	110	-0.5
MT Maintenance Co	2.5	865	-0.43	0.5	139	-0.5
Engineer Maintenance Co	2.5	538	-0.39	0.5	103	-0.5
Electronic Maintenance Co	2.5	738	-0.44	0.5	154	-0.5
GS Maintenance Co	2.5	620	-0.4	0.5	144	-0.5

Table A-7. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	2.5	550	-0.45	0.5	122	-0.5
Supply Co	2.5	1,558	-0.38	0.5	299	-0.5
Ammunition Co	2.5	768	-0.5	0.5	138	-0.5
Medical Logistics Co	2.5	48	-0.5	0.5	10	-0.5
H&S Co, Engineer Support Bn	2.3	644	-0.58	1	272	0
Engineer Support Co	2.3	1,217	-0.48	1	375	0
Bridge Co	2.3	207	-0.2	1	90	0
Bulk Fuel Co	2.3	437	-0.2	1	261	0
Engineer Co	7	987	-2	2	260	-1
H&S Co, Landing Support Bn	2	188	-1	1	177	0
Landing Support Equipment Co	2	342	-0.91	1	267	0
B&T Operations Co	2	404	-0.73	1	255	0
Landing Support Co	6	408	-3	3	204	0
H&S Co, MT Bn	2.3	603	-0.66	1	246	0
MT GS Co	2.3	906	-0.64	1	359	0
MT DS Co	5	875	-1	1	151	-1
H&S Co, Medical Bn	2.2	97	-0.4	1	111	0
Medical Co (Surg)	5	140	-1	1	28	-1
Medical Co (C&C)	9	162	-3	3	48	-1
H&S Co, Dental Bn	2.3	12	-0.7	1	5	0
Dental Co	7	0	7	2	0	2
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	2.6	1,326	-0.25	0.4	192	-0.6
Communication Co	2.6	920	-0.11	0.4	148	-0.6
MP Co	2.6	351	-0.07	0.4	598	-0.6
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		18,223			7,695	

Table A-7. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Aviation combat element						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	0	0	-1
MWCS	2.5	1,015	-0.5	0.5	272	-0.5
MACS	2.5	830	-2.5	0.5	189	-0.5
Hq, MATCS	2.2	53	-0.8	1	24	0
Det, MATCS	4.4	334	-6.6	2	150	0
MASS	2.5	558	-0.5	0.5	117	-0.5
Marine Air Defense Bn	2	1,958	0	1	979	0
H&HS, MWSG	3	153	0	0	0	-1
MWSS (FW)	4	2,804	-1	2	1,364	0
MWSS (RW)	3	1,887	-3	3	1,830	1
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	4	388	-1	2	194	0
MALS (FW)	4	1,440	-1	2	690	0
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	0	0	0
VMFA	6	1,452	-4	6	1,452	0
Hq, Marine Air Group (RW)	4	388	-2	2	194	0
MALS (RW)	4	1,352	-2	2	592	0
HMH	4	1,340	-5	2	670	1
HMM	16	3,088	1	8	1,544	6
HMLA	6	2,694	0	2	1,347	1
Aggressor Squadron	0	0	0	1	32	0
VMGR	2	648	-1	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		29,253			14,119	
All elements total		89,228			39,406	

Table A-8. Detailed breakdown of the active and reserve structures for the 1.5/1.5 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	2	604	-1	1	315	0
MEU CE	6	336	0	0	0	0
Hq, SRIG	1.5	77	-1.33	1.5	77	1.5
H&S Bn	1.5	348	-1.33	1.5	348	1.5
Intelligence Co	1.5	11	-1.33	1.5	11	1.5
SCAMP	1.5	69	-1.5	1.5	69	0.5
CI Team	6	96	-6	6	96	5
Topographic Platoon	1.5	71	-1.5	1.5	71	0.5
FIIU	1.5	95	-1.5	1.5	29	0.5
Int Platoon	1.5	83	-1	1.5	17	0.5
FORECONCO	2	318	-0.3	1	159	-1
ANGLICO	2	496	0	2	496	0
UAV Co	2	260	-1	1	74	1
H&S Co, Communi- cation Bn	1.6	347	-1.4	1.4	304	0.4
GS Co	2	524	-1	1	262	0
DS Co	5	670	-1	5	670	4
Service Co	1.6	621	1.6	1.4	543	0.4
H&S Co, Radio Bn	2	624	0	0.5	156	0.5
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		6,144			4,022	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	4	1,084	-5	2	540	0
Reconnaissance Co	4	368	-3	2	184	-1
Infantry Bn	9	8,361	-15	9	8,361	1

Table A-8. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	1.9	650	-1.1	1.1	376	0.1
DS Artillery Bn	6	4,452	-5	4	2,964	-1
DS Artillery Bn (augmented)	0	0	0	1	1,019	1
MLRS Bn	1	439	0.67	1	439	1
Combat Engineer Bn	1.5	968	-1.5	1.67	1,468	0.67
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	1.75	1,383	-0.25	1	825	-1
LAR Co	2	296	-1	1	145	0
LAI Bn	3	2,496	3	3	2,787	3
AAV Bn	1.5	1,716	-0.91	1.5	1,389	0.5
LAR Bn	1.5	1,317	-1.3	1.5	1,269	0.5
Division Hq	2	594	-0.95	1	259	0
Hq Co, H&S Bn	1.8	110	-1.03	1.2	72	0.2
MP Co	1.8	128	-1.07	1.2	85	0.2
Service Co	1.8	212	-1.2	1.2	142	0.2
Communication Co	1.8	596	-1.2	1.2	395	0.2
Truck Co	1.8	423	-1.2	1.2	280	0.2
SSC Team	1.8	22	-1.2	1.2	14	1.2
Division Band	1.8	92	-0.2	0	0	0
Ground combat element total		26,247			23,283	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	1.7	190	-1.06	1.5	191	0.5
Ordnance Maintenance Co	1.7	374	-1.26	1.5	330	0.5
MT Maintenance Co	1.7	588	-1.23	1.5	417	0.5
Engineer Maintenance Co	1.7	366	-1.19	1.5	309	0.5
Electronic Maintenance Co	1.7	502	-1.24	1.5	462	0.5
GS Maintenance Co	1.7	422	-1.2	1.5	431	0.5

Table A-8. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	1.7	374	-1.25	1.3	317	0.3
Supply Co	1.7	1,059	-1.18	1.3	777	0.3
Ammunition Co	1.7	522	-1.3	1.3	359	0.3
Medical Logistics Co	1.7	32	-1.3	1.3	25	0.3
H&S Co, Engineer Support Bn	1.5	420	-1.38	1.5	408	0.5
Engineer Support Co	1.5	794	-1.38	1.5	563	0.5
Bridge Co	2	180	-0.5	1	90	0
Bulk Fuel Co	1.5	285	-1	1.5	392	0.5
Engineer Co	6	846	-3	4	520	1
H&S Co, Landing Support Bn	1.5	141	-1.5	1.5	266	0.5
Landing Support Equipment Co	1.5	257	-1.41	1.5	401	0.5
B&T Operations Co	1.5	303	-1.23	1.5	383	0.5
Landing Support Co	4	272	-5	5	340	2
H&S Co, MT Bn	1.5	393	-1.46	1.5	369	0.5
MT GS Co	1.5	591	-1.44	1.5	539	0.5
MT DS Co	3	525	-3	3	453	1
H&S Co, Medical Bn	1.5	66	-1.1	1.5	167	0.5
Medical Co (Surg)	3	84	-3	3	84	1
Medical Co (C&C)	6	108	-6	6	96	2
H&S Co, Dental Bn	1.7	9	-1.3	1.3	7	0.3
Dental Co	5	0	5	4	0	4
H&S Co, H&S Bn	2	990	-0.91	1	532	0
Service Co	1.6	816	-1.25	1.4	673	0.4
Communication Co	1.6	566	-1.11	1.4	519	0.4
MP Co	1.6	216	-1.07	1.4	207	0.4
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		12,289			12,995	

Table A-8. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Aviation combat element						
Hq, Marine Air Wing	2	684	-1	1	304	0
MWHS	2	110	-2	1	55	0
Hq, MACG	2	328	-1	1	40	0
MWCS	2	812	-1	1	544	0
MACS	2	664	-3	1	377	0
Hq, MATCS	2	48	-1	1	24	0
Det, MATCS	4	304	-7	2	150	0
MASS	2	446	-1	1	234	0
Marine Air Defense Bn	2	1,958	0	1	979	0
H&HS, MWSG	2	102	-1	1	50	0
MWSS (FW)	2	1,402	-3	4	2,728	2
MWSS (RW)	2	1,258	-4	4	2,440	2
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	3	291	-2	3	291	1
MALS (FW)	3	1,080	-2	3	1,035	1
VMA	6	2,514	-1	0	0	0
VMA (AW)	4	1,156	-1	2	578	2
VMFA	6	1,452	-4	6	1,452	0
Hq, Marine Air Group (RW)	3	291	-3	3	291	1
MALS (RW)	3	1,014	-3	3	888	1
HMH	3	1,005	-6	3	1,005	2
HMM	12	2,316	-3	12	2,316	10
HMLA	4	1,796	-2	4	1,796	2
Aggressor Squadron	0	0	0	1	32	0
VMGR	2	648	-1	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		22,619			19,729	
All elements total		67,299			60,028	

Table A-9. Detailed breakdown of the active and reserve structures for the 2/0.5 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	3	906	0	0	0	-1
MEU CE	6	336	0	0	0	0
Hq, SRIG	2	102	-0.83	0	0	0
H&S Bn	2.2	510	-0.63	0	0	0
Intelligence Co	2.2	15	-0.63	1	7	1
SCAMP	2.2	101	-0.8	1	46	0
CI Team	10	160	-2	0	0	-1
Topographic Platoon	2.2	103	-0.8	1	47	0
FIIU	2.2	139	-0.8	1	19	0
Int Platoon	2.2	121	-0.3	1	11	0
FORECONCO	2.2	350	-0.1	0	0	-2
ANGLICO	2	496	0	1	248	-1
UAV Co	2	260	-1	1	74	1
H&S Co, Communi- cation Bn	2.6	564	-0.4	0	0	-1
GS Co	2.5	655	-0.5	0	0	-1
DS Co	8	1,072	2	0	0	-1
Service Co	2.6	1,009	2.6	0	0	-1
H&S Co, Radio Bn	2	624	0	0	0	0
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		8,020			779	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	4	1,084	-5	1	270	-1
Reconnaissance Co	4	368	-3	1	92	-2
Infantry Bn	12	11,148	-12	3	2,787	-5

Table A-9. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	2.5	855	-0.5	0	0	-1
DS Artillery Bn	7	5,194	-4	1	741	-4
DS Artillery Bn (augmented)	0	0	0	0	0	0
MLRS Bn	1	439	0.67	0.29	127	0.29
Combat Engineer Bn	2.33	1,503	-0.67	0.3	264	-0.7
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	2	1,580	0	1	825	-1
LAR Co	2	296	-1	1	145	0
LAI Bn	4	3,328	4	1	929	1
AAV Bn	2	2,288	-0.41	0.5	463	-0.5
LAR Bn	2	1,756	-0.8	0.5	423	-0.5
Division Hq	3	891	0.05	1	259	0
Hq Co, H&S Bn	2.8	171	-0.03	1	60	0
MP Co	2.8	199	-0.07	0	0	-1
Service Co	2.8	330	-0.2	0	0	-1
Communication Co	2.8	927	-0.2	0	0	-1
Truck Co	2.8	658	-0.2	0	0	-1
SSC Team	2.8	34	-0.2	0	0	0
Division Band	2.8	143	0.8	0	0	0
Ground combat element total		33,733			7,655	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	2.5	280	-0.26	0.5	64	-0.5
Ordnance Maintenance Co	2.5	550	-0.46	0.5	110	-0.5
MT Maintenance Co	2.5	865	-0.43	0.5	139	-0.5
Engineer Maintenance Co	2.5	538	-0.39	0.5	103	-0.5
Electronic Maintenance Co	2.5	738	-0.44	0.5	154	-0.5
GS Maintenance Co	2.5	620	-0.4	0.5	144	-0.5

Table A-9. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	2.5	550	-0.45	0.5	122	-0.5
Supply Co	2.5	1,558	-0.38	0.5	299	-0.5
Ammunition Co	2.5	768	-0.5	0.5	138	-0.5
Medical Logistics Co	2.5	48	-0.5	0.5	10	-0.5
H&S Co, Engineer Support Bn	2.3	644	-0.58	0	0	-1
Engineer Support Co	2.3	1,217	-0.48	0	0	-1
Bridge Co	2.3	207	-0.2	0	0	-1
Bulk Fuel Co	2.3	437	-0.2	0	0	-1
Engineer Co	7	987	-2	1	130	-2
H&S Co, Landing Support Bn	2	188	-1	0	0	-1
Landing Support Equipment Co	2	342	-0.91	0	0	-1
B&T Operations Co	2	404	-0.73	0	0	-1
Landing Support Co	6	408	-3	1	68	-2
H&S Co, MT Bn	2.3	603	-0.66	0	0	-1
MT GS Co	2.3	906	-0.64	0	0	-1
MT DS Co	5	875	-1	1	151	-1
H&S Co, Medical Bn	2.2	97	-0.4	0	0	-1
Medical Co (Surg)	5	140	-1	0	0	-2
Medical Co (C&C)	9	162	-3	1	16	-3
H&S Co, Dental Bn	2.3	12	-0.7	0	0	-1
Dental Co	7	0	7	1	0	1
H&S Co, H&S Bn	3	1,485	0.09	1	532	0
Service Co	2.6	1,326	-0.25	0	0	-1
Communication Co	2.6	920	-0.11	0	0	-1
MP Co	2.6	351	-0.07	0	0	-1
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		18,223			4,551	

Table A-9. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Aviation combat element						
Hq, Marine Air Wing	3	1,026	0	1	304	0
MWHS	3	165	0	1	55	0
Hq, MACG	3	492	0	0	0	-1
MWCS	2.5	1,015	-0.5	0	0	-1
MACS	2.5	830	-2.5	0	0	-1
Hq, MATCS	2.2	53	-0.8	0	0	-1
Det, MATCS	4.4	334	-6.6	0	0	-2
MASS	2.5	558	-0.5	0	0	-1
Marine Air Defense Bn	2	1,958	0	0	0	-1
H&HS, MWSG	3	153	0	0	0	-1
MWSS (FW)	4	2,804	-1	1	682	-1
MWSS (RW)	3	1,887	-3	2	1,220	0
MWSS (base support)	0	0	0	1	682	1
Hq, Marine Air Group (FW)	4	388	-1	1	97	-1
MALS (FW)	4	1,440	-1	1	345	-1
VMA	6	2,514	-1	0	0	0
VMA (AW)	6	1,734	1	0	0	0
VMFA	6	1,452	-4	4	968	-2
Hq, Marine Air Group (RW)	4	388	-2	1	97	-1
MALS (RW)	4	1,352	-2	1	296	-1
HMH	4	1,340	-5	1	335	0
HMM	16	3,088	1	4	772	2
HMLA	6	2,694	0	2	898	0
Aggressor Squadron	0	0	0	1	32	0
VMGR	2	648	-1	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		29,253			7,539	
All elements total		89,228			20,524	

Table A-10. Detailed breakdown of the active and reserve structures for the 1.5/1 alternative

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Command element</u>						
MEF CE (nucleus)	2	604	-1	0.5	158	-0.5
MEU CE	6	336	0	0	0	0
Hq, SRIG	1.5	77	-1.33	0	0	0
H&S Bn	1.5	348	-1.33	0	0	0
Intelligence Co	1.5	11	-1.33	1	7	1
SCAMP	1.5	69	-1.5	1	46	0
CI Team	6	96	-6	4	64	3
Topographic Platoon	1.5	71	-1.5	1	47	0
FIIU	1.5	95	-1.5	1	19	0
Int Platoon	1.5	83	-1	1	11	0
FORECONCO	2	318	-0.3	1	159	-1
ANGLICO	2	496	0	1	248	-1
UAV Co	2	260	-1	1	74	1
H&S Co, Communi- cation Bn	1.6	347	-1.4	0.9	195	-0.1
GS Co	2	524	-1	1	262	0
DS Co	5	670	-1	2	268	1
Service Co	1.6	621	1.6	0.9	349	-0.1
H&S Co, Radio Bn	2	624	0	0.5	156	0.5
Radio Co	4	496	-1	1	105	1
Civil Affairs Group	0	0	0	2	222	0
Command element total		6,144			2,391	
<u>Ground combat element</u>						
Hq Co, Infantry Regt	4	1,084	-5	1	270	-1
Reconnaissance Co	4	368	-3	1	92	-2
Infantry Bn	9	8,361	-15	6	5,574	-2

Table A-10. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
Hq Battery, Artillery Regt	1.9	650	-1.1	1	342	0
DS Artillery Bn	6	4,452	-5	2	1,482	-3
DS Artillery Bn (augmented)	0	0	0	0	0	0
MLRS Bn	1	439	0.67	0.29	127	0.29
Combat Engineer Bn	1.5	968	-1.5	1	879	0
Hq Co, Combined Arms Regt	2	542	2	1	270	0
Tank Bn	1.75	1,383	-0.25	1	825	-1
LAR Co	2	296	-1	1	145	0
LAI Bn	3	2,496	3	3	2,787	3
AAV Bn	1.5	1,716	-0.91	1	926	0
LAR Bn	1.5	1,317	-1.3	1	846	0
Division Hq	2	594	-0.95	1	259	0
Hq Co, H&S Bn	1.8	110	-1.03	1	60	0
MP Co	1.8	128	-1.07	0.7	50	-0.3
Service Co	1.8	212	-1.2	0.7	83	-0.3
Communication Co	1.8	596	-1.2	0.7	230	-0.3
Truck Co	1.8	423	-1.2	0.7	163	-0.3
SSC Team	1.8	22	-1.2	0.7	8	0.7
Division Band	1.8	92	-0.2	0	0	0
Ground combat element total		26,247			15,418	
<u>Combat service support element</u>						
H&S Co, Maintenance Bn	1.7	190	-1.06	0.8	102	-0.2
Ordnance Maintenance Co	1.7	374	-1.26	0.8	176	-0.2
MT Maintenance Co	1.7	588	-1.23	0.8	222	-0.2
Engineer Maintenance Co	1.7	366	-1.19	0.8	165	-0.2
Electronic Maintenance Co	1.7	502	-1.24	0.8	246	-0.2
GS Maintenance Co	1.7	422	-1.2	0.8	230	-0.2

Table A-10. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
H&S Co, Supply Bn	1.7	374	-1.25	0.8	195	-0.2
Supply Co	1.7	1,059	-1.18	0.8	478	-0.2
Ammunition Co	1.7	522	-1.3	0.8	221	-0.2
Medical Logistics Co	1.7	32	-1.3	0.8	15	-0.2
H&S Co, Engineer Support Bn	1.5	420	-1.38	1	272	0
Engineer Support Co	1.5	794	-1.28	1	375	0
Bridge Co	2	180	-0.5	1	90	0
Bulk Fuel Co	1.5	285	-1	0.5	131	-0.5
Engineer Co	6	846	-3	1	130	-2
H&S Co, Landing Support Bn	1.5	141	-1.5	1	177	0
Landing Support Equipment Co	1.5	257	-1.41	1	267	0
B&T Operations Co	1.5	303	-1.23	1	255	0
Landing Support Co	4	272	-5	3	204	0
H&S Co, MT Bn	1.5	393	-1.46	1	246	0
MT GS Co	1.5	591	-1.44	1	359	0
MT DS Co	3	525	-3	2	302	0
H&S Co, Medical Bn	1.5	66	-1.1	1	111	0
Medical Co (Surg)	3	84	-3	2	56	0
Medical Co (C&C)	6	108	-6	4	64	0
H&S Co, Dental Bn	1.7	9	-1.3	1	5	0
Dental Co	5	0	5	3	0	3
H&S Co, H&S Bn	2	990	-0.91	1	532	0
Service Co	1.6	816	-1.25	1	481	0
Communication Co	1.6	566	-1.11	1	371	0
MP Co	1.6	216	-1.07	1	148	0
Base Support Bn	0	0	0	2	2,372	0
Combat service support element total		12,289			8,998	

Table A-10. (Continued)

Type	Active			Reserve		
	Units	Personnel	Change from 1993	Units	Personnel	Change from 1993
<u>Aviation combat element</u>						
Hq, Marine Air Wing	2	684	-1	1	304	0
MWHS	2	110	-1	1	55	0
Hq, MACG	2	328	-1	1	40	0
MWCS	2	812	-1	0.5	272	-0.5
MACS	2	664	-3	0.5	189	-0.5
Hq, MATCS	2	48	-1	0.5	12	-0.5
Det, MATCS	4	304	-7	1	75	-1
MASS	2	446	-1	0.5	117	-0.5
Marine Air Defense Bn	2	1,958	0	0.5	490	-0.5
H&HS, MWSG	2	102	-1	0.5	25	-0.5
MWSS (FW)	2	1,402	-3	3	2,046	1
MWSS (RW)	2	1,258	-4	3	1,830	1
MWSS (base support)	0	0	0	2	1,364	2
Hq, Marine Air Group (FW)	3	291	-2	2	194	0
MALS (FW)	3	1,080	-2	2	690	0
VMA	6	2,514	-1	0	0	0
VMA (AW)	4	1,156	-1	1	289	1
VMFA	6	1,452	-4	4	968	-2
Hq, Marine Air Group (RW)	3	291	-3	2	194	0
MALS (RW)	3	1,014	-3	2	592	0
HMH	3	1,005	-6	2	670	1
HMM	12	2,316	-3	8	1,544	6
HMLA	4	1,794	-2	2	898	0
Aggressor Squadron	0	0	0	1	32	0
VMGR	2	648	-1	2	756	0
VMAQ	4	940	0	0	0	0
VMO	0		-1	0		-1
Aviation combat element total		22,619			13,645	
All elements total		67,299			40,452	

DATE: 92/12/08 TIME: 13:07:25

TO:
BMN

SENT BY: EMB \ed\EMB
SUBJECT: App A to RM 161

ATTACHMENTS:

<u>ORIGINAL NAME</u>	<u>DESCRIPTION</u>	<u>TYPE</u>
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APPENDIX B
UNIT DESIGNATIONS

APPENDIX B

UNIT DESIGNATIONS

This appendix lists the unit designations used in this volume. These designations are used as a shorthand to identify units in the various tables.

AA	assault amphibian
ACT	activity
ALBY/BAR	Albany/Barstow
ANGLICO	Air/naval gunfire liaison company
ASSNMT	assignment
AVN	aviation
Bn	battalion
C&C	collection and clearing
CAMLEJ	Camp Lejeune
CAMPEN	Camp Pendleton
Cbt Engr	combat engineer
CE	command element
CI	counterintelligence
Co	company
COMM-ELEC	communication-electronic
CTR	center
Det	detachment
DS	direct support
FIIU	force imagery interpretation unit
FLD	field
FORECONCO	force reconnaissance company
FSSG	force service support group
FT	fort
FW	fixed wing
GRPS	groups
GS	general support

H&HS	headquarters and headquarters squadron
H&S	headquarters and service
HMLA	Marine light/attack helicopter squadron
HMH	Marine heavy helicopter squadron
HMM	Marine medium helicopter squadron
Hq	headquarters
HQMC	Headquarters Marine Corps
I&I	instructor-inspector
Int	interrogation
LAI	light armored infantry
LANT	Atlantic
LAR	light armored reconnaissance
LFTC	landing force training command
MACG	Marine air control group
MACS	Marine air control squadron
MALS	Marine aviation logistics squadron
MAR	Marine
MARBRKS	Marine barracks
MARDET	Marine detachment
MARDIV	Marine division
MASS	Marine air support squadron
MATCS	Marine air traffic control squadron
MAW	Marine aircraft wing
MC	Marine Corps
MCAF	Marine Corps air field
MCAGCC	Marine Corps Air Ground Combat Center

MCAS	Marine Corps air station
MCB	Marine Corps base
MCCDC	Marine Corps Combat Development Command
MCLB	Marine Corps logistics base
MCRD	Marine Corps recruit depot
MCRDAC	Marine Corps Research Development and Acquisition Command (now called Marine Corps Systems Command (MARCORSYSCOM))
MEB	Marine expeditionary brigade
MEF	Marine expeditionary force
MEU	Marine expeditionary unit
MLR	Medium lift replacement
MLRS	Multiple launch rocket system
MSG	Marine security guard
MT	motor transport
MTN	mountain
MWCS	Marine wing communication squadron
MWHS	Marine wing headquarters squadron
MWSG	Marine wing support group
MWSS	Marine wing support squadron
PAC	Pacific
Plt	platoon
Regt	regiment
RW	rotary wing
SCAMP	sensor control and management platoon
SEC	security
SPT	support

Sqdn	squadron
SRIG	surveillance, reconnaissance, and intelligence group
Surg	surgical
SVC	service
TNG	training
UAV	unmanned aerial vehicle
VMA	Marine attack squadron
VMA (AW)	Marine all-weather attack squadron
VMAQ	Marine tactical electronic warfare squadron
VMFA	Marine fighter/attack squadron
VMGR	Marine aerial refueler/transport squadron
VMO	Marine observation squadron
WAR	warfare

APPENDIX C
NON-FMF STRUCTURE

APPENDIX C

NON-FMF STRUCTURE

Table C-1 presents current (FY 1993) non-FMF structure [C-1]. This structure does not include active-duty support to 4th MAW, nor does it include aviation "overhead" (aviation structure that is not part the FMF). The ACE portion of the FMF troop list accounts for aviation overhead.

Table C-1. FY 1993 non-FMF structure

Unit	Officers	Enlisted	Total
External	1,311	1,180	2,491
Fld Svc Assnmt	132	299	431
MCRDAC	355	333	688
MARDET Ft Leavenworth	0	15	15
HQMC	577	536	1,113
Hq Bn HQMC	26	230	256
Recruiting Activities	439	3,358	3,797
MC Spt Act KC	35	175	210
MARBRKS Wash DC	52	952	1,004
MSG Bn	33	1,434	1,467
MAR Spt Bn	72	629	701
LFTC Land/Pac	77	150	227
Ship Spt	62	90	152
MC Sec Forces	254	6,917	7,171
MCLB Alby/Bar	188	1,100	1,288
MCRD San Diego	224	1,597	1,821
MCRD Parris Island	227	1,831	2,058
MCB Quantico	140	874	1,014
SEC Bn Quantico	12	294	306
MCCDC Hq	245	249	494
MCCDC Schools	259	1,181	1,440
MCB CAMLEJ	116	1,048	1,164
CAMLEJ Schools	105	1,263	1,368
MCB Campen	147	1,192	1,339
Campen Schools	68	805	873
Mtn War Tng Ctr	14	195	209
MCAGCC 29 Palms	87	584	671
Comm-Elec School 29 Palms	50	572	622
MCB Camp Butler	81	841	922
4th MarDiv Hq	53	222	275
4th MarDiv I&I	237	1,512	1,749
AVN Tng Grps	374	1,073	1,447
MCAS Cherry Point	99	625	724
MCAS El Toro	77	563	640
MCAF Quantico	83	614	697
MCAS Tustin	16	146	162
MCAS Iwakuni	36	290	326
MCAS Futenma	13	104	117
MCAS New River	33	243	276
MCAS Kaneohe Bay	55	396	451
MCAS Yuma	52	567	619
MCAS Beaufort	46	302	348
Unallocated	1	1	2

Table C-1. (Continued)

Unit	Officers	Enlisted	Total
Total non-FMF	6,563	36,582	43,145
Unmanned/S billets	253	2,542	2,795
Non-FMF structure	6,816	39,124	45,940

REFERENCES

- [C-1] Headquarters, Marine Corps, Manpower Division, *Non-FMF Data Base Report: Organization Sort*, Mar 1992