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Manning Full-Time Positions in Support of the Selected Reserve

Marygail K. Brauner, Glenn A. Gotz

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Prepared for the
Assistant Secretary of Defense (Reserve Affairs)

RAND

PREFACE

RAND was asked by the Office of the Assistant Secretary of Defense (Reserve Affairs) to develop principles for manning full-time positions in support of the Selected Reserve in the Department of Defense. This report discusses problems related to full-time manning in the Selected Reserve and suggests broad principles and specific management strategies and guidelines that can be implemented to solve those problems.

The study focused on systemic problems that currently exist and that would most likely exist even if the size and structure of the Selected Reserve were to change. Thus, an attempt was made to develop guidelines that would apply even for a significantly changed Selected Reserve. The guidelines are of two types: 1) those related to how the total numbers of full-time support personnel in each reserve organization are determined and 2) those related to which types of full-time support people are chosen—i.e., active component personnel, full-time reserve personnel, civil servants who are required to be members of the Selected Reserve, and other civil servants.

The research covered in this report was conducted within the Defense Manpower Research Center, part of RAND's National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense and the Joint Staff.

SUMMARY

Approximately 173,000 people work in full-time positions in support of the Selected Reserve in the Department of Defense (DoD).[1] This number equals approximately 15 percent of all personnel in the Selected Reserve.[2] These full-time support (FTS) personnel fall into four categories:

1. Active Guard and Reserve (AGR) personnel. These are National Guard members on full-time National Guard duty and Reserve members on active duty. In addition to those specifically called AGRs, this category includes USNR Training and Administration of the Reserve personnel (TARs) and MCR Full-Time Support program personnel.
2. Military technicians (MTs). These are federal civilian employees who are required to be members (i.e., drilling members) of the reserve component in which they are employed as civilians.
3. Active component (AC) personnel. These are members of active components who have been assigned to Selected Reserve organizations.
4. Federal civil servants (CIVs). These are federal employees distinguishable from MTs by the fact that they are not required to be members of the reserve component in which they are employed.

The number of FTS personnel increased by approximately 49 percent from 1980 to 1989, reflecting a change in both the structure and mission of the Selected Reserve. A 38 percent increase occurred in the total size of the Selected Reserve during the same period. Given the changing nature of the threat currently facing the U.S. and the ongoing reexamination of force structures in DoD, it is likely that the size and structure of the Selected Reserve will continue to change during the next decade, implying changes in FTS manning as well.

The planned reduction in the size of the active components may be accompanied by a reduction in the size of the Selected Reserve. If so, decreases in the number of FTS personnel needed may also occur.

[1]This was the number programmed for Fiscal Year 1991.

[2]The components of the Selected Reserve in DoD are the Army National Guard (ARNG), Army Reserve (USAR), Naval Reserve (USNR), Air National Guard (ANG), Air Force Reserve (AFR), and Marine Corps Reserve (MCR).

However, in addition to providing approximately 9 percent of all FTS personnel, the active components provide large numbers of personnel and other resources to the Selected Reserve for classroom and unit training, base operating support, and other important functions. Thus, as the size of the active components decreases, the Selected Reserve may have to provide more of its own resources for these essential functions.

Identifying the most cost-effective number and mix of FTS personnel and justifying those requirements to Congress will require a consistent set of program objectives and a consistent set of policies that relate decisions about manning Selected Reserve support positions to those objectives. This report presents a set of principles and guidelines, derived from readiness and cost considerations, for manning FTS positions.

DETERMINING THE REQUIREMENT FOR FULL-TIME PERSONNEL

Two premises should underlie the services' process for determining FTS manpower requirements:

First premise: There are alternative manpower structures that can accomplish any given workload. Manpower requirements are commonly estimated as if there is only one way to man the organization and accomplish the work. They also are often determined without considering the feasibility or cost of actually providing the required personnel. Explicit consideration of alternative manpower structures, all equally capable of achieving specified readiness- and deployability-related goals, makes it possible to choose potentially lower-cost alternatives.

Second premise: There are no absolute workload requirements. Identifying specific workloads that could be accomplished with fewer people than the stated requirement would allow better-informed decisions about where to allocate authorizations when they fall short of requirements. Identifying specific workloads that could be accomplished with more people would provide justification for additional funding or end strength.

Based on these two premises, the best FTS structure can be determined using a three-part strategy:

1. Identify the work that should be done.
2. Identify alternative full-time manpower structures equally capable of completing the work.

3. Estimate the cost of each alternative structure and select the least costly one.

An important step in identifying the workload is developing a prioritized list of tasks that is related to FTS strength and ordered so that one can go from workload to manning and vice versa. Then, when authorized manning is less than required, it will be easy to determine the workload that can be accomplished with the decreased level of manning. The workload consequences of changes in actual full-time manning will thus be much more visible.

Another important step in identifying the workload is determining what drilling-reservist training should be done by full-time personnel. An explicit accounting of the FTS time that should be devoted to this training would give this task its proper priority.

The second part of the strategy, identifying alternative manpower structures equally capable of completing the work, requires that the productivity tradeoffs among different experience mixes of personnel be quantified. The first step in this process is to assess the relative productivities of personnel at each skill or experience level. The second step is to use the relative productivities and the required workload to identify alternative skill mixes that could accomplish the workload, subject to constraints on span of control and career management.

The final part of the strategy is estimating the costs of alternative structures. This part can be complex because it requires more than just providing official pay rates; a determination must also be made as to whether the required personnel can actually be acquired and retained at those rates. In addition, the costs of achieving any new personnel mixes should be included in the cost estimation.

CHOOSING THE MIX OF FULL-TIME SUPPORT CATEGORIES

Some of the reserve components are experiencing problems with their mix and use of FTS categories. Several of these problems were identified by earlier DoD studies but to date have not been resolved. We believe that the problems facing the services would benefit from consistent application of the following general recommendations.

Requirements for dual-status civilians (i.e., MTs) should be limited in several ways. The civilian and military responsibilities involved should be comparable, and the civilian and military grades of MTs should be aligned so that the chain of authority during the workweek

does not differ from the military operational chain of authority in the units. There should also be no positions in which the MT is simultaneously important to the mobilization of two different organizations: the one that employs him as a civilian and the unit with which he deploys. Finally, MTs should not be required when, because of pay or local area considerations, qualified personnel to fill the positions either cannot be obtained or are subject to very high turnover rates.

For numerous AGR and MT positions, especially in ARNG and USAR units, the FTS responsibilities are inconsistent with the responsibilities of the mobilization positions filled by the FTS personnel. It is common that administrative work takes precedence over drill period responsibilities, thereby causing the training program to suffer. In these cases, FTS personnel should not be allowed to fill mobilization positions.

It is fairly well known that mixing MTs and AGRs in units, especially when these personnel are doing the same types of work, causes morale problems. The reserve components should segregate these categories of FTS personnel by type of work and possibly by type of organization.

Because enlisted high years of tenure are not generally set, or if set are not very restrictive, there are significant numbers of FTS personnel who may be too old to be physically capable of performing their wartime jobs. The services should either vigorously enforce physical standards or establish a high year of tenure or maximum age for positions in which physical condition is important to wartime performance.

USAR units are experiencing substantial delays in filling authorized AGR and AC positions, and the positions left vacant are often demonstrably important to unit readiness. This problem is partly attributable to a shortcoming in the way USAR AGR authorizations are allocated. These authorizations do not account for the significant number of AGRs who are not part of the operating strength—i.e., the fraction of AGR strength that is always in transit between assignments, in resident service schools between assignments, and otherwise not available for assignment to authorized positions. The USAR should establish an "individuals account" to which it allocates manpower authorizations to cover AGRs not in the operating strength for these reasons. In addition, the active Army and the USAR should investigate the sources of delays in filling positions for AC personnel in the USAR.

There are conflicting demands for some groups of MTs upon mobilization. One such group is MTs employed as civilians by deploying units other than their drill units. The problem arises because these MTs, in their civilian capacities, assist units in preparing for mobilization. The reserve components should enforce the existing DoD policy that MTs employed by deploying units should drill with those units. A second group that is subject to conflicting demands is MTs working in nondeploying maintenance activities. Members of this group may be needed by their maintenance activities to support the mobilization of all units serviced by those activities at the same time they are required to go to their drill units for mobilization. The availability of at least a core group of MTs for nondeploying maintenance activities during reserve component mobilizations should be ensured.

In all reserve components, FTS personnel in aircraft units tend to emphasize maintaining and operating their equipment to the detriment of training the part-time reserve maintenance personnel. The components should determine whether part-time maintenance personnel could complete more of the peacetime workload so that the full-time maintenance work force could be reduced. They should also consider tying FTS personnel evaluations to the tested performance of the part-time maintenance personnel. A similar problem may exist on Naval Reserve Force ships. Because the full-time crews are busy standing watches while the ships are steaming, the part-time reservist crews may not receive enough training. Among the alternative solutions to this problem are increasing the full-time crew (which already makes up 60 percent or more of the ships' manning), reducing the number of drill weekends spent steaming, and finding other ways to meet Navy requirements while providing effective training.

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ACRONYMS AND ABBREVIATIONS

AC	active component
AFB	Air Force Base
AFR	Air Force Reserve
AGR	Active Guard and Reserve
ANG	Air National Guard
ARNG	Army National Guard
ART	Air Reserve technician
BX	base exchange
CBPO	consolidated base personnel office
CIA	Central Intelligence Agency
CIV	federal civil servant (non-dual status)
CO	commanding officer
CONUSA	Continental United States Army
DCSOPS	Deputy Chief of Staff for Operations and Plans
DoD	Department of Defense
EER	enlisted evaluation report
FBI	Federal Bureau of Investigation
FORSCOM	Forces Command
FTS	full-time support
FY	fiscal year
GAO	General Accounting Office
GS	general schedule
IMA	individual mobilization augmentee
IPM	inventory projection model
I&I	inspector-instructor
MCR	Marine Corps Reserve

MOS	military occupational specialty
MT	military technician
NCO	noncommissioned officer
OASD	Office of the Assistant Secretary of Defense
OER	officer evaluation report
optempo	operational tempo
OSD	Office of the Secretary of Defense
QRMC	Quadrennial Review of Military Compensation
RA	Reserve Affairs
S3	deputy for training and operations
SORTS	Status of Resources and Training System
TAR	Training and Administration of the Reserve
TDY	temporary duty
TO&E	table of organization and equipment
USAF	United States Air Force
USAR	Army Reserve
USGPO	United States Government Printing Office
USNR	Naval Reserve
XO	executive officer

1. INTRODUCTION

Approximately 173,000 people work in authorized positions identified as full-time support (FTS) of the Selected Reserve in the Department of Defense (DoD). This number equals approximately 15 percent of the entire Selected Reserve.[1] These people comprise full-time military personnel from the active components and the Selected Reserve, and civil servants, most of whom are required to have dual status as drilling members of the Selected Reserve. FTS personnel are intended to contribute to Selected Reserve unit and component readiness and deployability, and to the ability of all active and reserve components to operate together in the event of war.

The number of personnel in the Selected Reserve increased by 35 percent from 1980 to 1991, growing from approximately 850,000 to 1,150,800. This increase reflected the changing role of the Selected Reserve in the total force. Compared to 1980, a larger proportion of the Army's combat service support capability is now in the Selected Reserve, and many more Selected Reserve units must now be ready to deploy relatively early in a general mobilization. Congress has supported this increase in size and change in roles by funding additional FTS personnel and other resources. The number of FTS personnel grew from 113,390 to 173,121 between 1980 and 1991, an increase of 53 percent.

Given the changing threats facing the U.S. and the current reexamination of force structures in DoD, the Selected Reserve will probably undergo further changes during the next decade. The most likely structural changes will be in the mix of combat, combat support, and combat service support units and in the readiness requirements for units. However, other possible changes currently being discussed in DoD include the introduction of cadre units into the reserve force structure. The experience of Operation Desert Shield/Storm will

[1]The DoD reserve components are the Army National Guard (ARNG), Army Reserve (USAR), Naval Reserve (USNR), Air National Guard (ANG), Air Force Reserve (AFR), and Marine Corps Reserve (MCR). Each component consists of at least two categories: Ready Reserve and Retired Reserve. Except for the ARNG and ANG, each component also has a Standby Reserve. The *Selected Reserve* is that part of the Ready Reserve composed of all units and individuals having priority over all other reserve elements for training, equipment, and personnel. As a practical matter, members of the Selected Reserve are the only reservists who typically drill one weekend per month and attend two weeks of annual training. From here on, the term *reserve components* denotes the Selected Reserve.

provide additional impetus to examine alternative structures for the Selected Reserve. Any such size and structural changes will most likely lead to changes in FTS manning.[2]

The expected reductions in the size of the active components may cause increases in FTS requirements. The active components provide large numbers of personnel and other resources to the Selected Reserve for classroom and unit training, base operating support, and other important functions. As the size of the active components declines, the Selected Reserve may have to provide more of its own resources for these essential functions.

Questions about how full-time manpower requirements are determined have made it difficult for DoD to justify to Congress changes in total FTS manning in some of the reserve components. DoD has also had difficulty rationalizing its chosen mix of full-time military and dual-status civilian FTS personnel. The Army Reserve and Army National Guard especially have been singled out for criticism on these and other grounds by the General Accounting Office (GAO).[3]

Three issues must be looked at in assessing the use of FTS personnel in the Selected Reserve. The first issue is the necessity of using full-time personnel. Key questions here are, What work needs to be done, and does it require full-time personnel? The second issue concerns types of full-time personnel needed: Where full-time personnel are warranted, what type should they be? Some argue, for example, that positions requiring full-time military personnel should be filled by regular, active component personnel, and that other positions should be filled by either part-time workers (reserve or civilian) or full-time nonmilitary personnel. This type of argument cannot be resolved without a consistent policy regarding decisions about manning reserve support positions. The third issue is actually a broad range of

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[2]Congress has already mandated one change in FTS manning. The 1991 DoD Authorization Act directed a 30 percent reduction in the numbers of Army reserve component full-time military personnel (specifically the Active Guard and Reserve members) by 1997. This change is discussed in the Appendix.

[3]See United States General Accounting Office, *Problems in Implementing the Army's Reserve Components Full-Time Manning Program*, GAO/NSIAD-85-95, 4 June 1985; and United States General Accounting Office, *Army Reserve Components: Opportunities to Improve Management of the Full-Time Support Program*, GAO/NSIAD-90-43, February 1990. In addition to the criticisms cited here, the 1990 GAO paper (p. 3) found that "no one Army organization oversees and manages full-time support as a totally integrated program," and "the Army has not applied adequate monitoring mechanisms to its program, but it has taken steps to place the program under the Army's internal control system." These are internal Army management issues, rather than policy issues on the Office of the Secretary of Defense (OSD) level, and are not addressed in this report.

questions about management strategies. For example, Should FTS personnel be required (or allowed) to fill mobilization positions in the units they support?

This report sets forth the principles we developed for manning FTS positions, and describes specific strategies and guidelines for implementing those principles. These recommended approaches, which are adaptable to the reserve components' differing management philosophies, were motivated by a series of problems we observed in reserve units, some of which have also been documented in other studies. We believe that these problems persist because many aspects of the FTS management system need better-defined guidance and goals.

We interviewed officer and enlisted personnel on drill weekends to better understand the problems facing Guard and Reserve personnel and how those problems are either ameliorated or exacerbated by the FTS system. We typically spoke separately with at least four groups: full-time officers, full-time enlisted personnel, drilling reserve officers, and drilling reserve enlisted personnel. When more than one category of FTS personnel was present in the same unit, we usually spoke separately with personnel from each category. The units visited, which were primarily in the West, included a broad range of functional types, including flying units, ships, infantry, combat engineers, hospital evacuation, and several other types of combat service support units. We also visited a Continental United States Army (CONUSA) headquarters, a USNR readiness center, two Army readiness groups, two state military departments, and reserve component and service headquarters. In all, we visited approximately 30 organizations, several more than once.

BACKGROUND[4]

Full-time personnel perform a wide range of tasks. Although there are differences among units, the usual procedure is for FTS personnel in deployable units to organize the training agenda for the drill weekend and to participate in the training of the drilling reservists. These FTS personnel serve as recruiters, retention counselors, and trainers. They also maintain the equipment used to train during peacetime and to fight during wartime, as well as provide some units with skills

[4]For a detailed discussion of the FTS program, see Sixth Quadrennial Review of Military Compensation, *Compensation of Full-Time Support Personnel*, Vol. 1A, USGPO, 1989. A history of the military technician program may be found in United States General Accounting Office, *Information on Military Technician Conversions to Full-Time Active Duty Guard and Reserve*, GAO/FPCD-82-57, 8 September 1982.

that cannot be obtained from part-time drilling reservists. They conduct administrative and record-keeping activities and serve as advisors to reserve component commanders. FTS personnel outside deployable units participate in the administration of and set policy for the Selected Reserve. They serve as liaison between the active and reserve components and as advisors to active component commanders. They also inspect units, train personnel, recruit, and maintain equipment.

There are four categories of FTS personnel:[5]

1. Active Guard and Reserve (AGR) personnel. These are National Guard members on full-time National Guard duty and Reserve members on active duty.[6] In addition to those specifically called AGRs, this category includes USNR Training and Administration of the Reserve personnel (TARs) and MCR Full-Time Support program personnel.[7]
2. Military technicians (MTs). These are federal civilian employees who are required to be members (i.e., drilling members) of the reserve component in which they are employed as civilians.
3. Active component (AC) personnel. These are members of active components who are assigned to Selected Reserve organizations.
4. Federal civil servants (CIVs).[8]

Although FTS of reserve components has existed since the reserve components were established, the present MT program only dates from the 1950s. Before the end of World War II, most FTS of reserve units was provided by civilians who had no affiliation with the military. In the 1950s, reserve components began to hire equipment maintainers on a full-time basis, since airplanes, trucks, tanks, howitzers, and other combat equipment needed more maintenance than could be provided by the drilling reservists. The USAR preferred that its MTs come from the USAR, but did not make membership in the reserves mandatory until 1970. The National Guard has had the

[5]For complete definitions, see Department of Defense Directive 1205.18, *Full-Time Support for the Reserve Components*, 20 September 1988.

[6]For a discussion of the legal aspects of the AGR program, see Thomas Frank England, "The Active Guard/Reserve Program: A New Military Personnel Status," *Military Law Review*, Vol. 106, Fall 1984, pp. 1–75.

[7]In this document, *FTS* refers to the generic category, not to the MCR Full-Time Support program.

[8]Throughout this report, we refer to federal civil servants who are not required to be drilling members of reserve components as *CIVs* to distinguish them from MTs.

dual-status requirement for MTs since 1968; the AFR has required dual status since the MT program began in 1958.

During the late 1970s, administrative problems, operational readiness concerns, apprehension about military unions, and hiring difficulties led to expansion of the AGR program in the ARNG, USAR, and ANG. While all FTS has increased in the last decade, the numbers of AGRs in these three components have increased more rapidly than the numbers in any other of the FTS categories. However, the 1991 DoD Authorization Act mandates a 30 percent reduction in the number of AGRs in the ARNG and USAR by 1997.

The FTS programs in the USNR and MCR have evolved separately from the FTS programs in the other components. Neither the Navy nor the Marines uses MTs. The USNR was the first reserve component to use reservists as full-time reserve unit support. After World War II, as ships and flying units were transferred to the USNR, the number of FTS personnel in the USNR grew. This growth is attributable to the fact that ships and planes cannot be brought in and out of service to meet the drill schedules of USNR units; they must be maintained on a continuous basis. Total FTS on Naval Reserve Force ships ranges between 57 and 69 percent.

The MCR FTS program began with the establishment of the Inspector-Instructor (I&I) program in 1952. In this program, active component marines are assigned to reserve training centers to provide training assistance, administrative support, and guidance to reserve units. These personnel do not fill unit positions in the MCR units they support. However, active component marines are assigned to unit positions in MCR flying units. In the mid-1980s, as active component end strength declined, the Marine Corps was reluctant to assign active component personnel to reserve units. A new AGR program—termed Full-Time Support—was thus developed in the MCR.

Table 1 lists the numbers of positions programmed by each reserve component for each type of FTS category for 1991.[9] The table also

[9]There are thousands of other active component personnel and CIVs filling reserve-related positions not specifically identified as FTS of the Selected Reserve. These include active component trainers, who train reserve as well as active recruits; base-operating support personnel on facilities that house both active and reserve units; personnel working in the service, reserve component, major command, and numbered Army and Air Force headquarters in the continental United States; and personnel working in other activities in support of the reserves. In addition, state National

Table 1

1991 Programmed Strength

	AGR/TAR	MT	AC	CIV	Total FTS Personnel	Total Selected Reserve Personnel[a]	Percentage FTS Personnel
ARNG	26,199	28,457	546	395	55,597	447,300	12
USAR	13,344	8,237	1,163	1,884	24,628	295,162	8
USNR	22,997	0	8,772	2,974	34,743	149,120	23
ANG	8,468	23,963	640	1,944	34,988	116,300	30
AFR	655	9,923	634	4,387	15,599	71,553	22
MCR	2,224	0	4,990	352	7,566	41,732	18
DoD	73,887	70,580	16,745	11,936	173,121	1,121,167	15

Source: Office of the Assistant Secretary of Defense (Reserve Affairs).

[a]Individual mobilization augmentees have been subtracted from these numbers.

lists the total size programmed for each reserve component for 1991.[10] Approximately three-quarters of the FTS personnel in Table 1 are in deployable units or nonunit maintenance activities. The rest are involved in other activities, including recruiting and retention duty, reserve component management headquarters functions, reserve pay and personnel center functions, and serving as staff of reserve component chiefs.[11]

Table 1 reflects the differing manpower management strategies of the reserve components.[12] For example, the USNR and MCR employ no MTs, relying instead on full-time military personnel for the majority of their support. The TAR program provides the majority of the USNR's support; the MCR relies principally on active component personnel, especially in high-skill occupations, and only recently developed an AGR program.

Guard headquarters have state employees providing FTS to the adjutant general in each state. These personnel are not considered in this report.

[10]Individual mobilization augmentees (IMAs) are members of the Selected Reserve who are not assigned to a reserve component unit but are assigned to and trained for an active component organization or other federal organization billet that must be filled on or shortly after mobilization. IMAs are not generally supported by the FTS personnel listed in the table and are not included in the totals shown there.

[11]See Office of the Assistant Secretary of Defense (Reserve Affairs), *Reserve Component Full-Time Support: A Report Prepared for the Senate Armed Services Committee*, 1 January 1990.

[12]See Sixth QRMC, *Compensation of Full-Time Support Personnel*, for a review of the history of each reserve component's full-time manpower management decisions.

In contrast, the AFR relies almost exclusively on MTs, whom it calls Air Reserve technicians (ARTs), and on CIVs. ARTs provide almost all the full-time manning in flying squadrons and deploying support units. The majority of CIVs in the AFR are base-operating support personnel. The relatively few AGRs are typically found at higher headquarters, serving as recruiters or as liaison with the active Air Force in positions generally authorized in United States Code.[13]

ARNG policy is to use MTs and AGRs in different roles. The majority of full-time MT positions are in nondeploying maintenance activities; MTs typically (but not always) mobilize with the units that their maintenance activities support during peacetime. AGRs are more commonly assigned to deployable units. For example, in a typical ARNG company, the key full-time noncommissioned officer (NCO) positions are filled by AGRs. The USAR typically has three NCOs in each company, plus an MT as the unit administrator. One or more of the NCOs may be an AC member.

Differences in peacetime equipment operating rates among the components are the reason for much of the variation in the FTS percentages shown in Table 1. For example, significant numbers of full-time maintenance personnel are needed to support the high peacetime operating rates of flying units. An additional source of these differences is that Guard components typically provide more of their own infrastructure than do Reserve components.

REPORT ORGANIZATION

Section 2 discusses the methods currently used to determine how many FTS personnel are needed and presents our guidelines for determining total FTS requirements in reserve organizations. Section 3 discusses the differing ways in which the reserve components manage and use their FTS personnel; it then identifies a series of problems concerning the mix and use of FTS categories and presents options for their amelioration. These problems were drawn from our discussions with headquarters personnel in all the services, selected major commands, and state military departments, and from our visits to over 20 Selected Reserve units and other organizations. Section 4, the concluding portion of this report, draws together the common elements among the options and proposes changes to the management strate-

[13]AFR AGRs and other AGRs serving in such positions are commonly termed *statutory tour* personnel. They are ordered to active duty to fulfill the functions specified in Sections 265, 678, 3021, 3496, 8021, and 8496 of Title 10 of the United States Code.

gies and criteria commonly used to choose FTS categories. The Appendix applies some of our guidelines to an issue of current concern: a congressionally mandated reduction in the number of USAR and ARNG AGRs and their replacement by active component personnel.

2. DETERMINING HOW MANY FULL-TIME PERSONNEL ARE REQUIRED

The best way to justify FTS force structures is to demonstrate how changes to them would affect both the readiness of Selected Reserve units and the ability of those units to deploy on schedule in a mobilization. In practical terms, this means developing objectives that can be related to readiness and deployability, even if the relationship is imperfect, and then deriving the numbers of FTS positions needed to meet those objectives.

Why not relate FTS requirements directly to readiness? We could not find empirical evidence establishing the relationship between FTS manning and reserve component readiness. This is not surprising: DoD generally lacks the data needed to support the relationship between resources and measures of unit and/or force readiness.[1] Indeed, for many types of units there are no well established and easily measured readiness indicators.[2] Thus, while it would be ideal to determine FTS manning based on explicit measures of readiness, we are not optimistic about the possibilities of doing so in the foreseeable future.

Nevertheless, at the unit level it is possible to identify training and maintenance goals and the tasks that contribute to accomplishing them. For example, planning for and conducting training are fairly well defined activities. It should be possible to quantify the effects of changes in the numbers of personnel in these activities on the types and amounts of training accomplished. We adopted the following as the principal unit-level readiness- and deployability-related goals against which we evaluated FTS contributions:

[1]For example, see Glenn A. Gotz, "Operational Training and the Performance of Combat Units," in Glenn A. Gotz and Robert M. Brown, *Proc. Colloquium on Total Force Management*, N-3110-FMP, RAND, forthcoming.

[2]The Status of Resources and Training System (SORTS) scores are sometimes thought to measure readiness. However, this system is mainly concerned with counting the resources available in operating units, rather than with evaluating performance-based measures of readiness—i.e., "the ability of units or forces to deliver the wartime outputs for which they were designed (includes the ability to deploy and employ without unacceptable delays)." (Joint Chiefs of Staff, *Dictionary of Military and Associated Terms*, Joint Chiefs of Staff Publication 1, December 1989.) For a discussion of SORTS and proposals for improved measures of readiness and sustainability, see S. Craig Moore et al., *Measuring Military Readiness and Sustainability*, R-3842-DAG, RAND, 1991.

- Achieving effective unit training.
- Qualifying drilling reservists in their military occupations and ensuring their deployability.
- Maintaining unit equipment and supplies.
- Serving in difficult-to-train or difficult-to-maintain jobs that cannot be filled by part-time drilling reservists.

TECHNIQUES CURRENTLY USED TO DETERMINE MANPOWER REQUIREMENTS

Requirements for different functions are not equally easy to determine, one reason being that the workload essential to the reserve mission cannot always be identified. For example, it is difficult to show that a moderate change in the amount of administrative work completed, especially at headquarters levels, directly affects reserve unit capabilities. Hence, it is difficult to identify the number of personnel "required" to do the administrative work, even though it is clear that *some* amount of administrative work must be done. Other workloads, such as the maintenance tasks required to sustain programmed flying hours for aircraft squadrons, are more readily measured, and the manpower required to accomplish them is relatively easy to determine.

Various methods are used to develop manpower standards for FTS personnel, including management by exception, expert judgment, and workload measurement. The first two of these methods typically are not backed up by data, and hence are less supportable than the workload measurement method.[3]

Management by Exception

The management by exception approach assumes that the basic structure of the organization's authorized manpower is appropriate. The underlying logic in this approach is essentially "this is the way the organization has been manned in the past and it has worked." An advantage of this method is its stability; even if it does not produce the ideal manpower structure, unit commanders learn how to work around the shortcomings. Incremental changes are made when specific problems cannot be resolved with the existing manning—e.g.,

[3]Of all the services, the Army appears to be the most frequent user of the management by exception and expert judgment approaches for setting reserve organization FTS requirements.

when the workload requirements or other performance measures are not being met.

Because the units experience various problems in different order, their incremental manpower changes differ. A consequence is that similar units may have very different manpower requirement specifications, and there are no data available for deciding which unit's manning is the best. Thus, the management by exception approach does not lead to a generic manning of similar units.[4]

Expert Judgment

The expert judgment approach uses area or subject-matter experts to arrive at preferred manpower structures. Expert judgment is used when management by exception is judged inappropriate and more quantitative approaches are viewed as impractical. This approach is often used in three types of circumstances: when something other than workload drives the manpower requirement (e.g., leadership or span-of-control considerations), when determining manpower requirements for a new or restructured organization, and when "rationalizing" a current organization.[5]

This approach works best when it is clear that the parties making the judgments are disinterested. For example, the office of the Army Surgeon General has made sure that the expert panels it has sponsored to determine the extent to which different specialty mixes can satisfy wartime medical caseloads have included both military and nonmilitary physicians. In all applications, the experts must be guided to consider a range of possible structures. Otherwise they may concentrate on familiar structures, which tends to lead them to validate what currently exists.

Workload Measurement

The workload measurement approach is really a family of approaches that determine manpower requirements based on either estimated or actual workloads. Common to these approaches is that they estimate

[4]For example, there were significant full-time manning differences between ARNG and USAR units with the same wartime Tables of Organization and Equipment (TO&Es) before the Army Deputy Chief of Staff for Operations and Plans (DCSOPS) took steps to develop common full-time manpower structures for similar units in the two components.

[5]An example of this last circumstance is the Office of the Army DCSOPS's development of new FTS manpower standards to make the FTS structure of similar units in the ARNG and USAR more consistent.

the man-hours required to accomplish a given task or collection of tasks and then, based on personnel availability factors and typical skill-level or pay-grade structures, convert the man-hours to numbers of people in each skill level or pay grade. Where these approaches differ is in the degree of detail in the data used and how the data are collected.[6]

Because these approaches are based on quantified workloads, they are more easily defended than the management by exception and expert judgment approaches. They are well suited to determining full-time manpower needs for equipment-intensive units with high peacetime operational tempos (optempos)—e.g., aircraft squadrons or ships—since the consequences of not having enough full-time personnel are easy to determine in these cases. However, they can also be applied whenever a unit's desired workload can be specified and work force productivity can be either measured or estimated. In some organizations, workload measurement can only be used for a subset of the activities; the manpower requirements for the remainder of the organization must be developed using expert judgment.

Current methods for measuring service workloads typically estimate total required manpower based on average productivities and man-hours expended. These approaches do not separately keep track of the productivity of personnel at different skill levels. They thus overlook the fact that if personnel of a higher skill level are more productive, a work force with disproportionately more of these people could accomplish a given workload with less people than a standard work force would need. And the reverse would be true for a work force with disproportionately more low-skill personnel. If the productivities of personnel of different skill levels were explicitly accounted for, the tradeoff between numbers of personnel required and mix of skill levels could be examined.[7]

In some types of units, some positions must be manned full time regardless of optempo or workload. For example, aircraft maintenance shops commonly must perform tasks that require a minimum-size crew. Even though the tasks may not occupy all crew members for an

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[6]See Department of the Army, Headquarters, *Manpower Staffing Standard System*, Army Regulation 570-5, April 1984; and Department of the Air Force, Headquarters USAF, *Management Engineering Procedures*, Air Force Manual 25-5.

[7]Other researchers reviewed Air Force management engineering team techniques and reached the same conclusions. See B. E. Armstrong, S. W. Chapel, and S. C. Moore, *Air Force Manpower, Personnel, and Training System: Volume II—Analysis of the Enlisted Authorization/Assignment and Manpower Requirements/Personnel Objectives Subsystems*, N-1476-AF, RAND, May 1980, pp. 56–57.

entire workday, they all must be present if the tasks are to be completed in one day. Such requirements are also found aboard Navy ships. For example, a Naval Reserve Force ship requires that full-time personnel stand watches when the ship steams. Thus, even though the ship may not steam every day, many crew positions that could go to part-time personnel are filled by full-time personnel so they will be present when the ship does steam.

Even when there are minimum or integer manning requirements, however, there may be alternative full-time work force structures. For example, cross-skill training of full-time aircraft maintenance personnel would reduce maintenance manpower requirements by allowing these people to be members of more than one minimum-size crew. On ships, there may be possible tradeoffs between the seniority of full-time crew members and the amount of work that can be accomplished when the ship is not steaming.

GUIDELINES FOR DETERMINING FULL-TIME MANPOWER REQUIREMENTS

The remainder of this section presents what we believe is a feasible set of guidelines for determining full-time manpower requirements by skill level. These guidelines incorporate two premises we believe should underlie the services' process for setting FTS requirements:

First premise: There are alternative manpower structures that can accomplish any given workload. Manpower requirements are generally determined without considering the feasibility or cost of actually providing such personnel. Consequently, positions are sometimes identified (and authorized) that cannot be filled. For example, reserve units in major metropolitan areas are currently having difficulty finding MTs for the lower civil service grades. Possible ways to address this problem are to reallocate authorizations (and workloads) among full-time personnel of varying grades, find some other type of full-time person to do the work (e.g., a CIV), or use some combination of these two approaches to yield a feasible alternative manpower structure. Even if a particular "requirement" for a type of unit is feasible, specific consideration of alternative, equally capable full-time work forces makes it possible to choose a potentially lower-cost alternative.

Second premise: There are no absolute workload requirements. Service manpower requirements for units are tied to specific workloads for those units. However, identifying workloads that could be accomplished with fewer people than the stated requirement would

allow better-informed decisions about where to allocate authorizations when they fall short of requirements. Identifying workloads that could be accomplished with more people would provide justification for additional funding or end strength.

Based on these two premises, the best FTS structure can be determined by using a three-part strategy:[8]

1. Identify the work that should be done.
2. Identify alternative structures equally capable of completing the work.
3. Estimate the cost of each alternative structure and select the least costly one.

The remainder of this section discusses this strategy in detail, focusing on total numbers of personnel by experience or skill level. Issues concerning the selection of the different FTS categories (AGR, MT, AC, and CIV) are deferred until Sec. 3.

Identify the Work That Should Be Done

When workload-based standards are used, the focus is on the workload rather than some higher-level performance measure. The relationship of the workload to higher-level performance measures can be clear (e.g., when relating maintenance tasks to flying hours), but often is not (e.g., when determining requirements for an administrative workload). To increase confidence in the validity of manpower requirement statements, the first step in the requirements determination process should be to specify different potential levels of success in meeting readiness-related goals and to identify the types and amounts of work required to achieve each of those levels.

One part of identifying the workload is questioning the workload currently required of units. For example, during our visits to USAR and ARNG units with substantially different missions, we were told that the administrative work was so extensive that significant proportions of drill weekends were devoted to completing this work rather than

[8]This strategy is adapted from Chapter 4, "The First-Term/Career Mix of Enlisted Military Personnel," in Donald B. Rice, *Defense Resource Management Study: Final Report*, USGPO, February 1979; Glenn A. Gotz and C. Robert Roll, *Defense Resource Management Study Supporting Papers: The First-Term Career Mix of Enlisted Military Personnel*, USGPO, February 1979; and S. Craig Moore, *Demand and Supply Integration for Air Force Enlisted Work Force Planning: A Briefing*, N-1724-AF, RAND, August 1981.

satisfying drill-period responsibilities.[9] When workload and full-time manpower do not match, training may suffer and morale and retention may decline—not just for full-time personnel, but for part-time personnel as well. While this situation may be seen simply as an argument for more full-time personnel in the units, reexamination of the administrative workload required of the units may reveal tasks that could be eliminated.

Another part of identifying the workload is determining what training of the drilling reservists should be done by full-time personnel. This determination is not generally part of the process for setting FTS personnel requirements. However, explicitly accounting for training time would provide the FTS personnel the time they need to plan for the training and conduct it, thereby placing the proper priority on training drilling reservists.

Many of the peacetime tasks done by full-time personnel also must be done in wartime (e.g., equipment maintenance), so it is important that drilling reservists learn to perform them. A proportion of these tasks should be systematically set aside for the drilling reservists to ensure that they get to practice their wartime skills. Some USAR personnel told us that their units set aside approximately 20 percent of their maintenance workload for the drilling reservists.

Yet another part of identifying the workload is developing a prioritized list of tasks that is related to FTS strength and ordered so that one can go from workload to manning and vice versa. Then, when authorized manning is less than required, the workload that can be accomplished will be easy to determine. The workload consequences of changes in actual full-time manning will thus be much more visible.

Having to identify the relationship between workloads and manning and to prioritize the tasks also has another advantage when manpower reductions must be made. There is a tendency to preserve the manning for certain operational skills without regard to the identified workload. We observed an example of this problem in two AFR units in which mandated manning reductions were taken in CIVs and in ARTs that were not pilots, rather than in ARTs that were pilots. As a result, some ART pilots now perform many administrative tasks that are typically the responsibility of secretaries and junior enlisted personnel. It may be that a small reduction in the number of ART pilots in a wing or group would purchase sufficient administrative person-

[9]Another reason why administrative work is done during drill weekends is that it sometimes requires the presence of the drilling reservists. This issue, which is separate from that raised in the text, is discussed in Sec. 3.

nel to allow the remaining pilots to maintain the training responsibilities of the unit's ARTs.

Identify Aternative Structures Capable of Completing the Work

This part of the strategy involves identifying alternative organizational and/or manpower structures for handling the workload.

Organizational structures. The reserve components should periodically evaluate alternative organizational structures for training, administrative, and maintenance support of reserve units. The components currently display a wide range of these structures, some more effective than others. Prominent distinguishing features in these organizational structures are centralized versus unit-level support and how FTS is structured for peacetime jobs that have no wartime equivalents. Section 3 discusses several FTS problems that are generated by inappropriate organizational structures. The following comparison of Army and Marine Corps support for reserve unit training illustrates the kinds of alternative organizational structures that are possible.

The active Army provides centralized support to reserve unit training by assigning individuals to readiness groups and to reserve units.[10] There are 28 readiness groups, each consisting of 60 to 80 active component personnel whose job is to train the trainers in USAR and ARNG units.[11] The Marine Corps uses a decentralized system of I&I staffs attached to units to assist in both training of troops and administration of MCR ground force units.

While readiness groups and I&I staffs are different strategies for supporting reserve training, a common element is that active component personnel in readiness groups and I&I staffs do not fill mobilization positions in deployable units. However, almost all AGR, MT, and AC personnel supporting USAR and ARNG deployable units do fill mobilization positions in those units.

[10]Assignment to reserve units and readiness groups is not the only way that active component Army personnel support reserve training. See Glenn A. Gotz and Marygail K. Brauner, *Consequences of Reductions in Active Army Support for Army Reserve/Guard Training*, R-4017-FMP/RA/PAE, forthcoming.

[11]Active component personnel assigned to readiness groups are not formally considered FTS to the reserves and are not included in the counts of full-time personnel in Sec. 1.

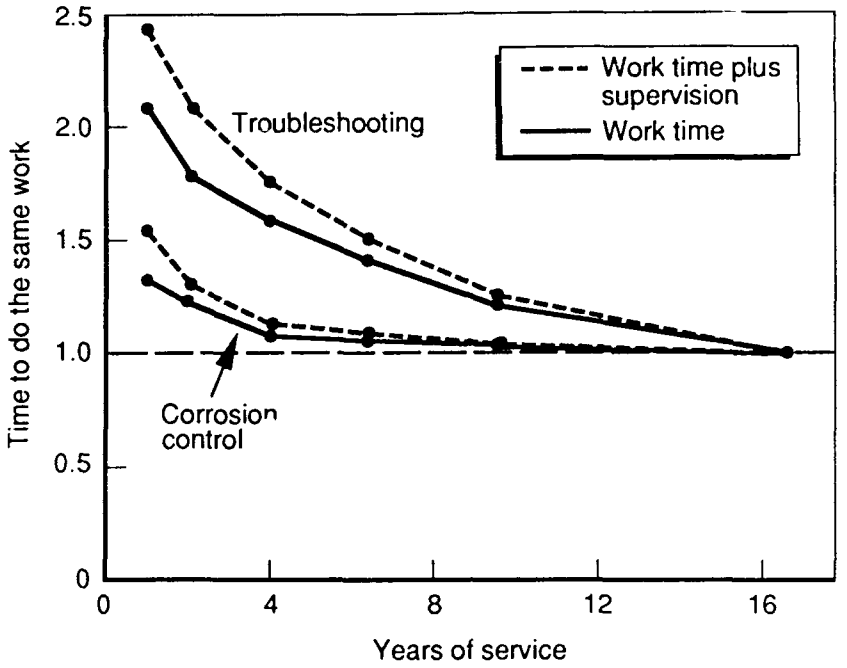
Manpower structures. Each workload consists of a mixture of tasks, some complex and some simple. The first step in identifying alternative full-time manpower structures is to assess the relative productivities of personnel at each skill or experience level. The second step is to use those relative productivities and the required workload to identify alternative skill mixes that could accomplish the workload, subject to constraints on span of control and career management.

To avoid unnecessary complexity, calculations of full-time work force alternatives should first be determined by skill level rather than personnel category.[12] This determination requires that comparable skill levels be defined for each category of full-time person, i.e., AGR, MT, AC, and CIV. By defining comparable skill levels, the choice of type of full-time person to use is not one of productivity, but one of cost and availability (and, in the case of CIVs versus the other types of personnel, one of military essentiality).

An example from Moore[13] illustrates the process of analyzing productivity by skill level and developing alternative skill mixes that can satisfy the workload requirements. Moore examined productivity tradeoffs by skill level for 13 groups of tasks performed in an active Air Force aerospace ground equipment shop. These 13 tasks represented 75 percent of the time spent by the organization. (Too few data were collected to estimate relative productivities for the remaining 25 percent of the time.) Figure 1 (reproduced from Moore, p. 16) shows two sets of curves, drawn from actual supervisors' assessments of their subordinates, indicating how much less time it takes people to do fixed amounts of work as they gain experience. The upper solid curve reflects, on a normalized scale, the actual work time required to do a fixed amount of troubleshooting of some of the sophisticated equipment maintained in the shop; the space between that curve and the upper dashed curve reflects the additional time required for a supervisor to monitor, assist, and train while the work

[12]USAR MT and active-duty military requirements are not simultaneously determined. Army policy is that AGR and AC positions should be established only if there are peacetime workload requirements corresponding to TO&E positions. (In practice, Army reserve component companies have AGR and/or AC training NCOs and readiness NCOs, but there are no corresponding TO&E positions.) MT requirements should be established when peacetime workload requirements do not correspond to TO&E positions. This artificial division into TO&E-related and non-TO&E-related peacetime work may mean that more people will be required to accomplish the workload than would otherwise be the case. We discuss inconsistencies between the support and TO&E responsibilities of both AGRs and MTs in Sec. 3.

[13]This discussion is drawn directly from Moore, *Demand and Supply Integration*. It paraphrases, quotes, and condenses his text.



SOURCE: S. Craig Moore, *Demand and Supply Integration for Air Force Enlisted Work Force Planning: A Briefing*, N-1724-AF, RAND, August 1981.

NOTE: The six dots along each curve correspond to the six combinations of pay grade and skill held by people who performed this work at March and Norton Air Force Bases (AFBs). From left to right, these six combinations are (pay grade, skill level) E-1 to E-3, skill 3; E-3, skill 5; E-4, skill 5; E-5, skill 5; E-5, skill 7; and E-6 to E-7, skill 7. The data were provided by 24 aerospace ground equipment maintenance supervisors who evaluated 90 individual technicians.

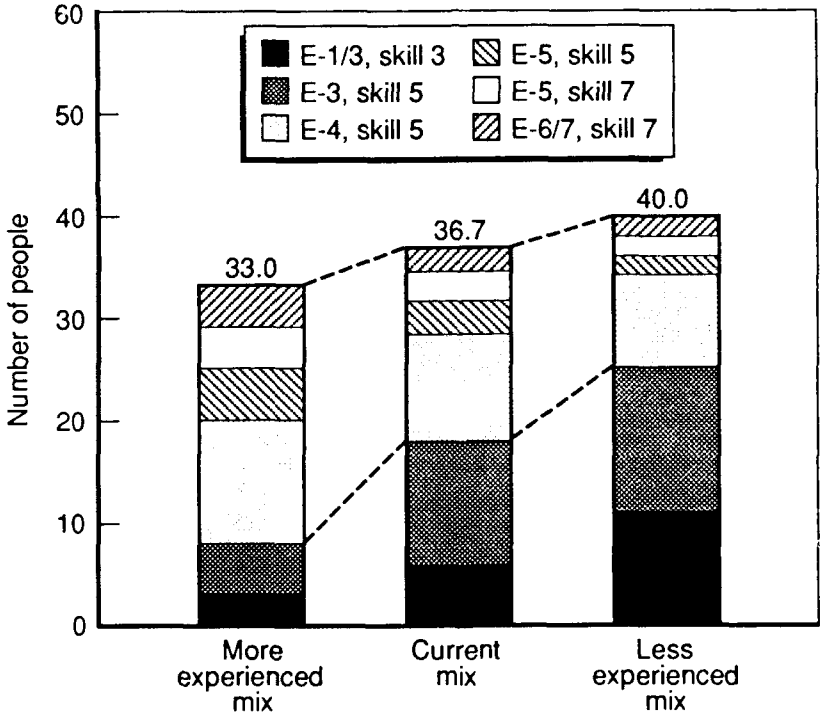
Fig. 1—Proficiency increases with experience

is being done and to check the work once it is completed. With performance and supervision time included, the most junior personnel averaged about 2.4 times more man-hours than did people in the most senior manpower category to perform a fixed amount of sophisticated troubleshooting. As the bottom two curves indicate, the value of experience was found to be considerably smaller in corrosion control, an activity requiring less technical training and experience.

The curves indicate that, depending on how much of a particular type of work is assigned to each category of technician, the number of man-hours required can vary. If the work is to be done within a specific time, the number of people required to do it can also vary. Figure 2

(also reproduced from Moore, p. 20) presents three manning configurations capable of accomplishing the required work in the same elapsed time. The center bar represents the mix of people performing the 13 types of work at Norton AFB in January 1980. The bars on either side indicate that the total manpower requirement can vary considerably depending on the experience mix. The less experienced the work force, the more people needed.

Moore's technique could be modified to account for cross-trained personnel, i.e., those personnel trained in one or more specialties in addition to their primary specialty. Cross-trained personnel provide two types of benefits. First, different types of workloads, each requiring less than 8 hours per day, can be consolidated and completed by one



SOURCE: S. Craig Moore, *Demand and Supply Integration for Air Force Enlisted Work Force Planning: A Briefing*, N-1724-AF, RAND, August 1981.

Fig. 2—A less-experienced work force must be larger

person if the person is trained for each type of work.[14] Second, cross-trained personnel provide valuable flexibility for meeting variable and uncertain workload demands (for example, for aircraft maintenance specialties), so that additional maintenance personnel may not be needed.[15]

Moore's technique becomes more effective as the scale of the organization increases. There is not much opportunity to substitute personnel of different experience levels in units with only two or three full-time personnel. However, as the peacetime workload is drawn away from individual units and consolidated at central locations, the opportunities for exploiting Moore's approach increase.

Moore's technique is also more effective if the wartime manning for the unit does not constrain the grade and occupational structure of the peacetime FTS force. Breaking the linkage between FTS and wartime manpower structures in many cases would provide greater manning flexibility for accomplishing the peacetime workload. As discussed earlier, there are full-time unit support personnel who do not fill mobilization positions, e.g., Marine Corps I&I staffs. Also, as we discuss in Sec. 3, there are FTS positions whose responsibilities inherently conflict with the responsibilities of mobilization positions.

Moore's technique is applicable to more than just technical tasks such as those found in the aerospace ground equipment shops. For example, in personnel administration, full-time personnel must process officer evaluation reports (OERs) and enlisted evaluation reports (EERs), arrange for temporary duty (TDY) travel, and conduct other administrative and reporting functions. A more senior person will be able to do each individual task more rapidly than a junior person and will be more able to change his mix of tasks as the workload mix varies. On the other hand, more senior personnel are more costly. A complete analysis would seek to determine whether a smaller, more senior work force is more cost-effective than a larger, more junior work force that can perform the same workload.

The final step in identifying alternative manpower structures is to identify the possible mixes of FTS personnel (AGR, MT, AC, CIV) that can accomplish the workload. Each work force is a collection of posi-

[14]Personnel in the manpower function at Headquarters AFR informed us that the AFR writes position descriptions for ARTs that often require more than one skill.

[15]For a discussion of the value of cross-trained maintenance personnel in uncertain wartime scenarios see Glenn A. Gotz and Richard E. Stanton, *Modeling the Contribution of Maintenance Manpower to Readiness and Sustainability*, R-3200-FMP, RAND, January 1986.

tions with specific characteristics. Choices among the FTS categories are based on the characteristics of the positions—e.g., some positions require currency and expertise in active component training and doctrine whereas others require specific knowledge of the reserve components. Issues concerning how to relate categories to positions and how to choose the best mix of categories are discussed in Sec 3. Specific recommendations on how to choose the best mix are provided in Sec. 4.

Estimate the Cost of Each Alternative Structure and Select the Least Costly One

Estimating the cost and feasibility of each alternative FTS manpower structure is the last part of the strategy for determining the best FTS structure. There are two steps to cost estimation:

1. Determine the appropriate costing technique for the alternative.
2. Estimate the costs of achieving and sustaining the personnel mix. This estimate must identify and include the costs for any changes in accession and training needed to effect a new mix of FTS personnel.

The costing technique needs to determine whether the personnel system can provide the desired mix of personnel. For example, a manpower mix that specifies many AGRs in the grades E-4 and E-6 but fewer in E-5 may not be sustainable. If adapting to such a mix requires movement among military occupations, the costing technique needs to account for the associated reclassification and retraining costs. Also, official pay rates should not be used to cost out alternative mixes of personnel unless it is clear that the positions can be filled at those rates. There is little point in identifying the cost of a low-pay-grade MT as equal to his civil-service pay plus his drill pay if, in fact, no individuals are willing to take the job for the sum of those pay rates.

The costing technique should be based on how the personnel system will obtain the full-time manpower. In some instances, additional full-time personnel may be hired from the ranks of part-time drilling reservists or drawn from the civilian labor market; in other instances, the personnel system may have to promote from within, increase accessions at the bottom, and rotate personnel. When the first method of providing personnel is appropriate, standard costing techniques based on pay and allowances, retirement accrual, and other annual costs can be used. The second method of providing personnel, however, requires a more sophisticated costing technique.

Large structured personnel systems cannot adjust instantly and without cost consequences to changes in manning. Hence, for centrally managed forces such as TARs, USAR AGRs, and AFR MT officers, cost estimation requires a personnel inventory projection model (IPM). An IPM can be used to predict the evolution of a personnel inventory whenever that inventory can be described by years of service, pay grade, occupation, and/or other personnel characteristics.[16] An IPM generally must account for personnel flows between its inventory cells. These flows are of particular interest because they generate certain costs, e.g., accessions generate recruiting and training costs. The general classes of personnel flows can be described as follows:

- *Losses from the organization.* Loss flows include mandatory and voluntary retirement as well as a variety of losses that occur before retirement, such as attrition and involuntary separation. These losses differ in timing and rate for the four categories of FTS personnel.
- *Gains or increases from outside the personnel system.* Such gains are ordinarily called *accessions*. For military personnel, such gains are often categorized as non-prior-service and prior-service accessions.
- *Endogenous movement within the organization.* Most IPMs provide for the "aging" of personnel by increasing their years of service as the IPM moves dynamically through time. Many IPMs account for promotions and lateral migration between occupations.

The cost of each alternative mix can be calculated by applying cost factors (e.g., civil service and/or military wage rates, retirement accrual) to the IPM's projected personnel inventories and flows.

[16]IPMs are commonly found in military personnel planning and programming organizations but are less familiar to cost analysts. The IPM description here is drawn from unpublished notes by Richard E. Stanton. A description of highly aggregated IPMs for MTs and AGRs can be found in Jennifer H. Kawata, David W. Grissmer, and Richard L. Eisenman, *The Reserve Force Policy Screening Models (POSM): A User's Manual*, R-3701-JCS/RA/FMP, RAND, June 1989.

3. CHARACTERISTICS OF THE FULL-TIME SUPPORT SYSTEM

There is no strong evidence that any single mix of the existing FTS categories will best satisfy the readiness- and deployability-related goals outlined in Sec. 2. For example, even though none of the USNR's full-time manning is provided by MTs and the AFR's full-time manning in flying units is provided almost solely by MTs, both components are commonly regarded as well managed and ready to perform their mobilization assignments. Unless there is a significant long-term cost difference between the two programs, we see no point in requiring fundamental changes to apparently successful programs for the sake of standardization.

However, we have observed some problems with the mix and use of FTS categories. This section describes the characteristics of FTS personnel in each component that should affect the choice of category. Problems caused by the current mix of full-time personnel and by inconsistencies between weekday and drill-period responsibilities are raised, and options are proposed for solving these and other problems through the appropriate choice of FTS category or changes in the strategy for managing FTS categories.[1] While we do discuss the relative merits of the options, we do not estimate their costs.

THE FULL-TIME SUPPORT CATEGORIES

The management and use of each FTS personnel category differ from one reserve component to another.[2] For example, the ANG treats AGRs and MTs as virtually interchangeable at the unit level, which is not the case for the ARNG. Differences in the management and use of AGRs and MTs in the reserve components seem to be caused more by component policies than by any intrinsic factors. In reserve components that do not regularly rotate AGRs among assignments, only custom, cost, and availability compel the choice of AGR or MT. In contrast, the USNR TAR program, because of its rotation patterns

[1]The option of developing a new FTS category to solve many of these problems was beyond the scope of this study.

[2]See the Sixth Quadrennial Review of Military Compensation, *Compensation of Full-Time Support Personnel*, Vol. 1A, USGPO, 1989, Table 2-1 ("Active and Reserve Component Full-Time Support Personnel Life Cycle Management") pp. 2-3 through 2-13, and the text following the table for additional details.

and close interaction with the active component, is much more similar to the active component of the Navy than to the AGR program in any of the other reserve components.

Regular rotation is a key distinction among FTS personnel. AC personnel, USNR TARs, USAR AGRs, MCR AGRs, and AFR officer MTs regularly rotate among assignments;[3] individuals in the other FTS categories do not rotate as a matter of policy. The rotation that does occur in these other categories is typically among more senior officers and enlisted personnel who change units in order to be promoted.

Those in favor of regular rotation believe that it keeps people fresh and challenged by new problems and experiences, promotes the transmission of new ideas and skills, and prevents the formation of "good old boy" networks. Those in favor of permanent or semipermanent assignment at one location believe that it improves familiarity with the equipment to be maintained, improves the cohesion of units by integrating the full-time personnel with the drilling reservists, and has a positive effect on the retention of full-time personnel. Both points of view could be correct.

We saw no evidence that a policy of regular rotation makes a difference in individual or unit performance. However, the majority of the full-time personnel we interviewed believed that senior enlisted and officer personnel should rotate periodically for the reasons just presented. We heard this opinion in units as well as at headquarters functions and across the reserve components. We even heard it from ARNG full-time personnel, despite their recognition of the more limited (within-state) opportunities for rotation. A thorough investigation of the costs and advantages of rotation by occupational area would be beneficial for determining the best rotation policy.

Active Guard and Reserve Personnel

AGR personnel, by their very nature, have a specialized knowledge and understanding of their reserve components. As is also true for AC personnel and MTs, AGRs are sometimes used to provide skills to units that are difficult to train or maintain among part-time drilling reservists (e.g., instructor pilots). AGR officers are subject to the Reserve Officer Personnel Act, which provides high year of tenure

[3]The Marine Corps did not require AGRs to rotate among MCR units until FY 1990, when the commandant of the Marine Corps directed that AGRs rotate at least once every five years.

rules. Enlisted AGRs have no firm tenure limits except by service policy.

The key points with regard to AGRs are

- USNR TARs are managed most nearly like AC personnel. TAR officers rotate through AC assignments and may assume command positions in either active or reserve units when eligible. TAR enlisted personnel do not rotate through AC assignments, but their career paths and rotation patterns are very similar to those of their AC counterparts.
- Because ARNG AGRs do not regularly rotate, they are more similar to MTs than they are to their AC counterparts. Most states discourage or even prohibit ARNG AGRs from assuming command positions.
- USAR AGRs do not rotate through AC unit assignments and do not assume positions of command (e.g., company or battalion commander).
- The ANG treats AGRs and MTs (ARTs) as interchangeable in terms of the jobs they perform in units. ANG AGRs assume command positions (e.g., squadron command).
- The AFR is unique in that it does not use AGRs for unit support. The few AFR AGRs serve as recruiters and in Headquarters USAF, major command headquarters, and the Air Force Reserve Personnel Center.
- MCR AGRs, called Full-Time Support personnel, are much less representative of the range of skills in the active components than are AGRs in the other reserve components. Neither enlisted personnel nor officers rotate through active component assignments, and officers do not assume command positions. Promotion and continuation prospects are less certain for these personnel than for AGRs in the other reserve components.

Military Technicians

Like AGRs, MTs are specialized in their knowledge and understanding of their reserve components. The majority of full-time maintenance personnel in the reserve components are MTs. MTs are sometimes used to provide skills to units that are difficult to train or maintain among part-time drilling reservists. Because MTs are not bound by military occupation specialties (MOSs), there is greater flexibility in deciding what tasks they can perform. Their civil service position descriptions can be written to allow/require them to do a

greater variety of jobs than is contained within any single MOS's range of work.

Key points with regard to MTs are as follows:

- AFR MTs (ARTs) usually have civil service jobs closely related to their military jobs. They are the only full-time personnel who assume command positions in the AFR. Flying units are generally commanded by reservists who are ARTs.
- ANG MTs (ARTs) also have civil service jobs closely related to their military jobs and can assume command positions.
- USAR MTs often do not hold civilian jobs closely related to their military jobs. As drilling reservists, they may assume command of units.
- ARNG policy is that MTs' weekday jobs are to be compatible with their wartime jobs.[4] As with ARNG AGRs, ARNG MTs do not typically hold command positions.
- The USNR and the MCR do not employ MTs.

Almost all MTs are covered by either a federal wage system or a general schedule (GS) pay classification. Personnel falling under the federal wage system, commonly termed *wage board personnel*, are blue-collar workers (e.g., maintenance personnel); their pay levels are determined by surveys of prevailing wages in the local area. Over 60 percent of AFR and ANG MTs are wage board employees, as are approximately 60 percent of ARNG MTs and almost 45 percent of USAR MTs.[5] The GS occupations are held by professional, administrative, technical, and other non-blue-collar personnel. Until FY 1991, GS wage levels were national, rather than local, and not differentiated by occupation. However, small differentials were recently introduced in Boston and Los Angeles.

Active Component Personnel

AC personnel bring to the reserve units state-of-the-art expertise in doctrine and training. They are sometimes used to provide units with skills that are difficult to train or maintain among part-time drilling reservists. Key points with regard to their role are as follows:

[4]This policy is not always followed. See the discussion of mobilization assignments for MTs in Sec. 3.

[5]See Sixth QRMC, *Compensation of Full-Time Support Personnel*, Appendix I.

- AC Marines provide well over half of the MCR's FTS personnel. AC Marines in aviation units are in the relatively more technical occupations; other AC Marines principally serve as members of I&I teams.
- AC personnel are not a significant presence in ARNG units. Furthermore, except for unit advisors and to support conversion to new aircraft, AC personnel are seldom assigned to AFR and ANG units.
- AC Army officers serve on reserve battalion staffs, and AC enlisted personnel often serve as company training NCOs and supply sergeants.

Civilians (Not Required To Be Dual Status)

CIVs typically are easier to recruit than MTs at the lower grades. Because there is no requirement for CIVs to hold dual status as drilling reservists, those who are not physically fit or are too old for military service are included in the pool of potential employees. Also included are those who prefer not to be drilling reservists. However, when CIVs are used instead of MTs, recruiting demands for part-time drilling reservists are increased.

FULL-TIME SUPPORT PROBLEMS AND OPTIONS

We next describe eight general FTS manning problems that we observed in our visits to Selected Reserve units, and identify options for their amelioration. We adopted the format used here because it is the most effective way to demonstrate the need for a consistent set of FTS policies. Our goal is to clearly identify the problems and provide possible solutions.

The eight problems discussed here were focused on because they all had two distinguishing characteristics: 1) the frequency with which we either heard about or observed them and 2) their prevalence in a) all or almost all of the units we visited in at least one component, even though those units had different missions, or b) their commonality to a type of unit across components. We were not the first to discover many of these problems, and the problems are not all equally serious. Further, some of the more promising options have been previously proposed by the reserve components. While for various reasons these options were not adopted when first proposed, the potential changes in the role of the Selected Reserve in the total force now make it more important that the problems be solved.

Problem 1

Definition: Administrative work frequently is allowed to take precedence over the weekend drill-period responsibilities of full-time personnel. Unit training suffers.

The heavy administrative burden in reserve units has been noted by outside observers[6] and by members of the Selected Reserve themselves. An analysis of the 1986 Reserve Components Survey showed that "in general, equipment and training facilities and administrative paperwork come out as the most serious [readiness-related] problems in all components."[7]

Part of this problem stems from there being no close correspondence between the weekday and drill-period jobs of many full-time personnel, and there not being enough full-time personnel in the unit to accomplish the workload during the week. We heard comments from full-time personnel at every USAR and ARNG battalion- and company-level organization we visited about the large administrative workload and the fact that the incentive was to put administrative work ahead of training. These comments were especially prevalent among MTs whose civilian jobs were not similar to their wartime jobs.

Another factor contributing to this problem is the fact that some administrative tasks can only be done when the drilling reservists are present. For example, the training NCO in a USAR or ARNG company is the administrator responsible for much of the detailed planning and arrangements for the unit's training. On drill weekends, he frequently must be in the reserve center or armory coordinating schedules and activities rather than in the field functioning with his squad or platoon.

We were told that the detrimental effects on training cause dissatisfaction and a higher turnover rate among part-time drilling reservists. It also seems clear that pressure to accomplish extraordinary workloads can cause burn-out and a higher turnover of full-time personnel.

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[6]Sixth QRMC, *Compensation of Full-Time Support Personnel* (p. xxxii), states that "during the Sixth QRMC unit visit program, full-time support personnel were observed to be overburdened with administrative work, much of which is no longer performed at the unit level in the active components." It also identifies "obsolete systems and procedures employed in the support of reserve units" as part of the problem and argues that "this obsolescence may also limit wartime capability."

[7]David Grissmer, "Perceived Constraints to Unit Readiness: Evidence from the 1986 Survey of Reserve Forces," in Glenn A. Gotz and Robert M. Brown, *Proc. Colloquium on Total Force Management*, N-3110-FMP, RAND, forthcoming.

Options for Problem 1

We identified three full-time manpower structure options that, alone or in combination, would contribute to solving the problem:[8]

1.1 Increase the number of full-time personnel available to cover the administrative workload during the week.

1.2 Where possible, enforce compatibility between weekday and drill-period jobs. Full-time personnel whose weekday jobs have no comparable mobilization positions should not be allowed to fill a position on the unit's wartime manning document.[9]

1.3 Move most of the administrative workload out of deployable units.

Adopting option 1.1 will help solve the problem only if higher echelons do not respond by increasing the workload. Especially in USAR units, there is a perception that demands from higher levels keep pace with increases in full-time manning. There may always be conflicting incentives for full-time personnel whose weekday work differs significantly from their wartime jobs. Thus, we are pessimistic that simply increasing full-time manning would completely solve the problem.

FTS positions can be divided into two groups: 1) those that have comparable mobilization responsibilities (e.g., supply sergeants) and 2) those whose weekday responsibilities have no equivalent wartime tasks (e.g., training NCOs). Option 1.2 would eliminate many of the conflicting responsibilities of full-time personnel who are in the second group. Adopting this option would reduce the number of full-time personnel filling positions on a unit's wartime manning document. Instead, components using civil servants as full-time unit support would use more non-dual-status drilling reservists (i.e., more CIVs than MTs) to fill these positions. Components using full-time military personnel as full-time unit support would account for these personnel outside the unit's manning document.[10] In the absence of an increase

[8]Our focus here is on the mix of full-time manning categories. An option discussed in Sec. 2 is to examine the workload to ensure it is worth the cost of completion.

[9]The 1978 "Gerard Study" recommends that "each dual status military technician . . . occupy a military position in the Selected Reserve unit supported, *the duties of which are identical or substantially the same as his or her technician position*" (emphasis added). Department of Defense, Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics), *Report on Full-Time Training and Administration of the Selected Reserve* (Gerard Study), June 1978.

[10]There are many instances in which active-duty personnel do not deploy with the unit they support. For example, see the discussion of the Marine Corps I&I teams be-

in total full-time manning, this option would enhance training at the expense of administrative work.

There are various ways to accomplish the administrative tasks that require interaction with part-time reservists. Presence on drill weekends could be made a condition of employment for CIVs. AC personnel could be ordered to be present. Alternatively, part-time military or civilian personnel could assist in weekend administration. For example, when Naval Reserve Force ships steam with their part-time crews on weekends, they also carry nondeploying part-time officers who perform administrative functions for the part-time crew.

Option 1.3 would clearly eliminate the conflict between administrative work and training in units. The MCR and AFR have been relatively successful at moving administration out of war-fighting units. Attached to MCR infantry companies are I&I teams composed primarily of AC personnel. The I&I teams and battalion headquarters relieve the companies of a substantial administrative burden, and the companies have no full-time personnel filling positions on the wartime manning document.

If the administrative workload needs to be accomplished even after the unit is mobilized, the full-time administrative positions should be turned into mobilization positions. For example, AFR and ANG flying units are supported by (deployable) consolidated base personnel offices (CBPOs), which take care of most of the personnel record-keeping responsibilities. CBPOs are staffed by ARTs and part-time drilling reservists. This structure has allowed the AFR to maintain compatibility between civilian and military jobs among its ARTs.[11]

The Army's Forces Command (FORSCOM) developed a Command Support Center plan that would have moved administrative activities out of units to centralized administrative organizations. After a transition period, this plan would have manned the administrative organizations with MTs. Full-time manning in units would have been limited to AGRs and AC personnel. The plan made no provision for compatibility between military and civilian positions for the MTs who would staff the support centers and, indeed, provided no strong logic

low. Also, the full-time personnel working with Naval Air Reserve augment units do not deploy with those units.

[11]For statements of AFR policies on compatibility, see Department of the Air Force, Headquarters Air Force Reserve, *The Air Reserve Technician*, AFRES Pamphlet 40-15, 15 November 1989; and United States Office of Personnel Management, *Recruitment of Air Reserve Technicians Through Competitive Examination (ART Agreement)*, FPM Supplement (Internal) 930-71 (republished by Hq AFRES/DPC, 1 December 1987, with authorized changes).

for why the support center staff should be dual status. In December 1988, the House Appropriations Committee directed the Chief of the USAR not to test or implement the plan.[12]

Problem 2

Definition: Lines of authority during the workweek do not always correspond to the military chain of command. An MT may be senior to AC and AGR personnel during the week but outranked by them in military grade.

This problem is unique to the USAR. It is fairly common to find that the senior MT in a battalion holds an enlisted grade, which means he is senior to AC and AGR officers and other MTs during the week, but is outranked by the officers during drill periods. This inconsistency can cause uncertainty about whether instructions given during drill weekends are to be followed during the week. Established patterns of authority during the 22 working days per month are reversed on drill weekends, during active-duty training, and upon mobilization.

The extent of this problem seems to be dictated by personality traits. If the senior civil servant sees himself as a staff assistant to the commanding officer (CO) (which his position title, "senior staff administrative assistant," implies), all seems to work. But if he sees himself as "in charge" during the week, difficulties can arise on weekends and during mobilization, when the usual patterns of authority are reversed.

The reversal in the chain of authority is attributable to the lack of compatibility between the civilian and military grades and jobs of MTs. The other components that use MTs maintain much closer compatibility between military and civil service grades than the USAR does.

Options for Problem 2

2.1 Assign an AGR as the senior full-time person (e.g., CO, executive officer [XO], or deputy for training and operations [S3]) at the battalion level.

[12]A letter from Jamie L. Whitten (Chairman, House of Representatives Committee on Appropriations) to the chief of the USAR expressed concern that "the Army Reserve continues to reduce technician positions, to move technician spaces, and to change technician job descriptions."

2.2 Align military and civilian grades to eliminate reversals in the chain of command.

Option 2.1 solves the senior leadership problem by eliminating ambiguity: an officer during the week is an officer on the weekend. It is not uncommon to find a full-time officer as the officer in charge during the week in ARNG units and Naval Air Reserve units. Indeed, in some Naval Air Reserve squadrons, the CO and XO positions rotate between TARs and part-time drilling reservists.[13]

Option 2.2 adopts the AFR and ANG approach. For example, a full-time ANG air commander is the senior civil servant in a wing and outranks all the MTs in military grade as well. An advantage of this approach is that it also eliminates the inconsistency between weekday and drill-weekend responsibilities discussed above.

Problem 3

Definition: The presence in one unit of MTs and AGRs who are doing the same types of work can cause morale problems.[14]

This problem exists in the USAR, ANG, and, to a lesser extent, the ARNG. MTs and AGRs are in the same units for several reasons. There are Congressionally mandated personnel strength limits on the number of AGRs and floors on the number of MTs in each component. There are also restrictions on the ability of the reserve components to move MTs to different assignments. These factors have made it difficult to segregate the two categories of support personnel or to standardize to one category.

The morale problem arises because there are differences in pay, career opportunities, and work rules for the two categories of personnel. The Sixth QRMC, for example, shows that MT supervisors can earn less than their AGR subordinates.[15] Also, as discussed above, an MT supervisor may be subordinate on the weekend to those AGRs he supervises during the week. The Sixth QRMC also notes that "active duty rules for duty hours differ from civil service rules. . . . The result

[13]Rotating the CO and XO positions between a TAR and a drilling reservist preserves command opportunities for both groups. Either the XO or the operations position should be open to part-time reservists as a path to CO if the CO position is to be open to part-time reservists.

[14]This problem has been raised by several studies, most recently by the Sixth QRMC, *Compensation of Full-Time Support Personnel.*

[15]Sixth QRMC, *Compensation of Full-Time Support Personnel,* p. 6-14.

has been allegations of 'politics' and favoritism on both sides by members of these two groups.[16]

We did not find evidence of similar conflicts between AC personnel and reserve component FTS personnel, and no such problems were mentioned during our unit visits.

Options for Problem 3

3.1 For each type of FTS position, restrict the reserve component FTS personnel to either AGRs or MTs.

3.2 For each type of organization, standardize unit and nonunit reserve component FTS personnel to either AGRs or MTs.

Option 3.1 does not eliminate the mixing of AGRs and MTs in reserve organizations, but it reduces the competition between the two groups. It probably would not require any changes in the congressional end strength ceilings and floors if the change was made gradually through attrition.

Option 3.2 has been implemented in several of the components. The AFR has standardized its full-time unit support to MTs—the ARTs—and CIVs. Neither the USNR nor the MCR uses MTs. Full-time personnel in ARNG units are typically AGRs; ARNG MTs are principally found in nonunit maintenance and administration activities.

Problem 4

Definition: Positions are authorized that cannot be filled or that have very high turnover rates.

Military Technicians. This problem is most common in the low-grade civil service MT positions. It appears to stem primarily from pay inadequacy, especially in major metropolitan areas where civil service pay is not competitive with the wages offered in the private sector.

To circumvent the pay problem, position responsibilities are sometimes overstated to justify a higher civil service grade and hence a higher wage. Even this solution is problematic, however. When a civilian personnel office reviews such an MT position description, the responsibilities appear to overlap those of AGRs. Since the MT's job is currently protected, the AGR must be transferred elsewhere.

[16]Ibid., p. 6-19.

Options for Problem 4 (MTs)

4.1 Increase civil service pay to make it competitive in local areas.

4.2 Use CIVs instead of MTs.

4.3 Reorganize the workload to accommodate a more senior, but smaller, work force—i.e., reduce the number of low-grade personnel and increase the number of (higher-productivity) higher-grade personnel.

Option 4.1 is clearly the most straightforward of the three options. The federal government has for many years provided for local differentials in wage grade pay. However, Congress only recently passed legislation allowing local differentials in GS pay,[17] and because of costs, these differentials may not be widely introduced. (They have been small so far and have only been put in effect in two major metropolitan areas.) Moreover, allowing local differentials among all civil servants is problematic because it affects the pay of many more civil service employees than just MTs. Nonetheless, in a study having a broader perspective than just civilians working in support of the Selected Reserve, the GAO concluded that there are serious recruitment and retention problems because of inadequacies in the civil service pay system.[18]

Option 4.2 would drop the dual-status requirement for some civil servants. As we noted above, dropping this requirement opens up a larger market for the relatively low-paying civil service grades and increases the demand for part-time reservists. Clearly, this option is viable only for full-time positions for which the relationship between full-time responsibilities and mobilization position is weak.

Option 4.3, reorganizing the workload, requires that there be enough full-time personnel to effect workload tradeoffs. However, if the workload can be consolidated at central locations, the possibilities for tradeoffs increase. For example, in the MCR, much of the administrative burden of companies is consolidated at battalion level.

MCR Active Guard and Reserve Personnel. The MCR has had difficulty filling all of its AGR positions in some locations. We do not know if the problem is attributable to factors peculiar to those locations (e.g., high housing prices), to the MCR Full-Time Support pro-

[17]Federal Pay Comparability Act, Public Law 101-509, 15 November 1990.

[18]See United States General Accounting Office, *Recruitment and Retention*, GAO/GGD-90-117, September 1990; and United States General Accounting Office, *Federal Pay: Special Rates*, GAO/GGD-90-118, September 1990.

gram being fairly new, or to some other factors. The MCR AGR faces more career uncertainty than do other AGRs because the Full-Time Support program is explicitly not a career program. Hence, although the pay structure for MCR AGRs is the same as for all other AGRs, MCR AGRs have a lower expectation of receiving retirement pay. These factors, plus the fact that MCR AGRs are now expected to rotate among assignments, may make recruiting more difficult and cause a higher turnover rate.

Options for Problem 4 (MCR)

4.4 Make the MCR AGR program more attractive to potential recruits by providing greater assurance of follow-on assignments.

4.5 Increase pay in shortage locations/occupations through the use of bonuses.

4.6 Eliminate the MCR AGR program and fill all FTS positions with AC Marines.

With the exception of the TAR program, none of the AGR programs are career programs. However, the management of AGRs has customarily been roughly equivalent to that of career programs in the USAR, ARNG, and ANG. Option 4.4 would require the Marine Corps to change its AGR management philosophy so that its view of FTS would match that of the other components. Currently, the Marine Corps does not believe it needs a cadre of full-time MCR members to run the day-to-day operations of the MCR; it prefers instead to use AC personnel for that role.

As for option 4.5, we believe increases in MCR AGR pay should be in the form of bonuses for two reasons. First, this form of increase allows specific skills and geographic areas to be targeted. Second, if the problem of filling AGR positions is only temporary, a bonus program can be reduced or eliminated.

Option 4.6 is consistent with Marine Corps philosophy. Our understanding is that the Full-Time Support program was created in response to reductions in active component end strength. Manning all FTS positions would require restoration of active component Marine Corps officer and enlisted end strengths equal to the number of programmed positions in the Full-Time Support program.[19]

[19]Option 4.5 would resolve another issue that may be real or just perceived. During our visits to units, several AC personnel independently commented that the quality of MCR Full-Time Support personnel was significantly lower than that of AC

USAR Active Guard and Reserve and Active Component Personnel. USAR units are experiencing significant delays in filling authorized active-duty military positions. We visited units in which an AGR or AC member assigned to a position rotated out and his replacement did not show up until as much as a year later. The positions left vacant are often demonstrably important to unit readiness. For example, personnel in units that had experienced delays in filling supply sergeant positions told us that these gaps leave room for mismanagement and pilferage—the units will not have all the right equipment in the right places for training and for mobilization.

These delays in filling positions do not seem to be produced by one factor. There is an important shortcoming in the structure of authorizations for USAR AGRs that contributes to the problem, but we do not know if it is the sole reason for the AGR gaps. We can only speculate on why positions authorized for AC personnel experience coverage gaps.

Some fraction of AGR strength is always in transit between assignments, in resident service schools between assignments, and otherwise not available for assignment to authorized positions. These AGRs do not fill authorized positions but do count as part of total AGR strength. Thus, given that total AGR strength is equal to the number of authorized positions and the USAR fails to account for AGRs not available for authorized positions, the USAR allocates more positions to units than it has the strength to fill. The USNR, which is the only other component with significant rotation among full-time reservists, avoids this problem because it allocates manpower authorizations to account for personnel outside the operating strength.

Options for Problem 4 (USAR)

4.7 Establish a USAR "individuals account" by allocating authorized manpower positions to cover AGRs not in the operating strength.[20]

4.8 Investigate the reasons for the delays in filling AC positions in USAR units.

Marines. We did not hear similar comments about AGRs from AC personnel during our visits to units in other components.

[20]Each active component has an individuals account. Any component whose personnel regularly rotate among assignments should have an individuals account. The Army calls its individuals account the Trainees, Transients, Holdees and Students (TTHS) Account. Holdees include prisoners, patients, persons in permanent change of stations, and persons pending separation.

With regard to option 4.7, the Army has estimated that its individuals account should be approximately equal to 4 percent of the total USAR AGR program.[21] If the USAR cannot obtain additional authorizations from Congress, then it must identify which authorized positions in units or other USAR organizations should be eliminated (or never filled) so that all remaining authorized positions can be filled—i.e., the USAR needs to prioritize its authorized positions. Failure to do so leaves positions unfilled and provides no control over which positions and which units are undermanned.

Delays in filling positions authorized for AC personnel may be attributable to many factors. One possible factor is that the active component may be experiencing shortages of personnel with the specific skills required by the USAR. Members of more than one unit told us about supply sergeant problems; it may be that there is a supply sergeant shortage in the active component. Also, there may be shortcomings in the personnel requisition process. Sixth Army personnel told us that the USAR requisition process for AC personnel is being changed to eliminate a number of problems. Finally, the problem may lie with the personnel detailers—i.e., the individuals who assign people to positions. When there are personnel shortages, detailers may be penalized more heavily for not filling active component units than for not filling USAR units, in which case the USAR will always bear the brunt of shortages. Unfortunately, these are all speculations. The active Army and USAR need to investigate these and other potential explanations for the delays in filling authorized positions for AC personnel in the USAR.

Problem 5

Definition: Some full-time personnel are unlikely to be physically able to perform their jobs in wartime.

A principal source of this problem is the significant proportion of older FTS personnel. In 1989, approximately 23 percent of the E-7 MTs in both the ANG and ARNG, 17 percent of the E-7 MTs in the AFR, and 11 percent of the E-7 MTs in the USAR were over 50 years old, as were about 8 percent of the E-7 AGRs in the Guard compo-

[21]See Robert D. Wiegand (Chief of Staff, Headquarters Forces Command), *Trainee, Transient, Holdee and Student (TTHS) Account for the United States Army Reserve (USAR) Active Guard Reserve (AGR) Program,* memorandum for Deputy Chief of Staff for Personnel, Department of the Army, enclosure.

ments and 14 percent of the E-7 AGRs in the AFR.[22] In contrast, fewer than 1 percent of MCR and USNR full-time enlisted personnel were over 50.

This significant number of older FTS personnel is attributable to at least three factors. First, the high year of tenure regulations for senior enlisted personnel are not enforced. Second, the retirement system for civil servants does not pay benefits until much later than the retirement system for active-duty personnel. Because dual status is required to maintain the civil service position, MTs have an incentive to remain in the Selected Reserve until eligible for civil service retirement.[23] Third, there are breaks in military service between leaving the active component and joining the Selected Reserve.

Physical condition is not equally important for all types of units and skills. For example, the wartime physical demands on an infantry platoon sergeant are much greater than on an administrative specialist. More generally, physical demands vary across the reserve components because of their significantly different occupational mixes. Thus, the fact that approximately 23 percent of E-7 MTs are over 50 years old is a problem in the ARNG but perhaps not a problem in the ANG. The typical ARNG MT, who is likely to be out in the field, has a more physically demanding mobilization position than his ANG counterpart, who is likely to fill a maintenance position.

Options for Problem 5

For those positions (and/or military occupations) with demanding physical requirements:

5.1 Establish and strictly enforce appropriate physical standards.

5.2 Establish a high year of tenure or age for each military grade.

5.3 Change the civilian retirement system for MTs to induce earlier retirement.

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[22]With the exception of those for the USAR MTs, these percentages were derived from Report A7 in Office of the Assistant Secretary of Defense (Reserve Affairs), *Official Guard and Reserve Manpower Strengths and Statistics, FY 1989 Summary*, RCS: DD-RA(M)1147/1148. OASD (Reserve Affairs) provided the USAR MT number.

[23]The Reserve Compensation System Study pointed out this "aging" problem and identified the civil service retirement system as a chief factor. That study also commented that the aging technician force slows up career advancement for part-time reservists. See Office of the Deputy Assistant Secretary of Defense (Reserve Affairs), *Reserve Compensation System Study: Final Report*, 30 June 1978, p. V-84.

5.4 Establish a maximum entry age for MTs and AGRs for each military grade.

5.5 Require that positions be filled by AGR or AC personnel.

Option 5.1 is the most direct way to attack this problem. The Army has identified the physical requirements associated with each combination of MOS and grade or skill level. These requirements vary considerably among occupations. For example, an Army infantryman (MOS 11B) in pay grade E-8 should be able to occasionally climb a rope a distance of up to 30 feet and frequently walk, run, crawl, and climb over varying terrain for distances of up to 25 miles. The physical requirements for an administrative specialist (MOS 71L) are essentially those required of anyone who works in an office.[24] However, even though these physical requirements are clearly stated, there appears to be a reluctance to apply them, especially in the case of MTs, who would lose their civil service jobs if they were to lose their military jobs for not meeting the physical standards.

Option 5.2 establishes for Selected Reserve enlisted personnel what already exists for officers and for all AC personnel. However, it creates a problem for those MTs who, because of the dual-status requirement, would lose their civilian jobs before they could begin to collect retirement annuities.

Option 5.3 would solve the problem created for MTs by option 5.1 and/or option 5.2 by changing the civilian retirement system as it applies to MTs. The Civil Service Retirement System and the Federal Employees Retirement System provide for retirement benefits for those discontinued in service who are at least 50 years old and have a minimum of 20 years of federal civil service or who are any age and have completed at least 25 years of service. The adequacy of these provisions and the sizes of the retirement annuities would have to be evaluated if high year of tenure programs are adopted for MTs. There are precedents for a retirement system geared toward MTs such as that suggested in option 5.3. The CIA, FBI, and air traffic controllers, for example, have retirement systems designed to help satisfy the special requirements of those organizations.

Alternatively, when high year of military tenure is reached, MTs would have to be protected through civilian personnel management or position management changes. For example, as part of normal MT

[24]See Department of the Army, Headquarters, "Enlisted Career Management Fields and Military Occupational Specialties, Army Regulation 611-201, *Military Occupational Classification and Structure*, Issue 1, February 1989.

career progression, an MT who lost his military status could be transferred to another civil service position. The new position could be one of a set of positions for which Selected Reserve experience, but not military status, has been determined to be valuable[25] and that are reserved for former dual-status technicians. Whether it is possible to have enough of these positions to absorb all those reaching high year of tenure would have to be investigated.

The ages established by option 5.4 should be related to normal military grade progression and tied to the maximum age/grade established in option 5.2. Individuals should not be appointed as AGRs or MTs if it is likely that they would be involuntarily separated because of age/grade before reaching eligibility for reserve retirement.

Adoption of option 5.4 may be especially important in the event of large active component manpower reductions, which may yield large pools of applicants for AGR and MT positions. Many of these individuals will be too old to expect normal career progression if maximum age/grade standards are adopted. This consideration applies especially to MTs who would plan to retire from both the Selected Reserve and the civil service.

Option 5.5 does not guarantee that enlisted personnel will leave at younger ages, but the evidence is that most will, the reason being that military retirement benefits begin immediately upon retirement from active duty for AGRs. This option appears to be particularly difficult for the AFR to adopt because it does not use AGRs in deployable units. However, of all the reserve components, the AFR probably has the smallest proportion of enlisted positions in which age is an important factor.

Problem 6

Definition: AC personnel take significant amounts of time to adjust to the reserve environment and lack specialized knowledge of their Selected Reserve component.

The reserve component work environment can be extremely different from the active component environment, and AC personnel in reserve units must function differently. In reserve units, most people are part-time reservists who do not come to work every day, training

[25]For example, there are positions in USAR commands that would benefit from being filled by personnel with USAR experience but would not necessarily receive additional benefits from being filled by dual-status MTs.

must be compressed into short time periods, and family and business constraints impinge on the availability of the part-time personnel. The full-time personnel in these units tend to work very long hours, in part because there are fewer of them than there are in the active units. In reserve units with small numbers of full-time personnel, those personnel have supervisory-level responsibilities and much more hands-on work than their counterparts in active units. They cannot delegate work to junior personnel during the workweek because there are few or no junior personnel available. AC FTS personnel also tend to do more and different kinds of administrative work than they would in the active components. These problems are most significant for small, isolated units in which the duties are different.

There is often very little family support for AC personnel assigned to reserve units. The severity of this problem varies among the components. AC Army personnel can be assigned to USAR units far from active component Army facilities. These personnel do not have access to medical, base exchange (BX), commissary, and other family support facilities, or to the social support structure that exists in an active component military community. On the other hand, Naval Reserve Force ships are ported in U.S. Navy facilities, so AC personnel assigned to these ships are in familiar surroundings.

Options for Problem 6

The solution to this problem depends on the FTS position. AGRs or MTs should be assigned to positions where they are good substitutes for AC personnel. However, there are positions or occupations for which current AGR and MT programs cannot provide the needed state-of-the-art expertise in doctrine and training. The options for staffing these positions are as follows:

6.1 Establish a regular pattern of active/reserve component rotation for selected AC personnel and provide these personnel with the additional skill identifier of *reserve component specialist*.

6.2 Fill the positions with AGRs who are required to rotate through active component assignments.

6.3 Establish a program for converting mid-career active component personnel to AGRs.

Option 6.1 provides the needed familiarity with the reserve component environment via repeated tours while preserving the active component identity and experience. If promotion advancement

among these reserve component specialists is held equal to that of other active component personnel in the same military occupations, the perception in some active components that a reserve component tour is bad for the career or that the better AC personnel are not sent on such tours would be eliminated.

Option 6.2 provides much the same benefits as option 6.1, the principal differences being the "home" component and the number of tours spent in each component. Option 6.2 describes the USNR TAR officer program.

Option 6.3 infuses the AGR force with personnel who are current in active component doctrine and training. Because the career advancement of these AC personnel depends on their performance in their reserve components, they may have greater incentives to integrate with their reserve components than would AC personnel serving normal tours with reserve units. Career advancement for more junior AGRs should not be too adversely affected. If the accessions of those who were previously in the active component are limited to occupations for which current AGR and MT programs cannot provide the needed state-of-the-art expertise in doctrine and training, there should be no concern about limiting promotion advancement for more junior AGRs.

Options 6.1 and 6.2 have the advantage of creating personnel with reserve-specific skills earlier in their careers. For example, Navy TAR yeomen/personnelmen are specially trained for USNR paperwork.

Problem 7

Definition: There are conflicting demands for some MTs upon mobilization.

There are two groups of MTs who upon mobilization do not deploy with the organizations that employ them as civilians. One group, in the USAR, consists of MTs employed as civilians by deploying units other than their drilling units.[26] In a general mobilization, these MTs would leave the units that employ them as civilians in order to mobilize with their drilling units. Thus, important civilian employees who could help their units mobilize are not allowed to do so.

[26]The existence of this group is a violation of DoD Directive 1205.18.

Options for Problem 7 (MTs employed in deployable units other than their drilling units)

7.1 For those whose civilian and military jobs are not comparable, do not allow dual status.

7.2 For those whose civilian and military jobs are comparable, their components should enforce the policy that these MTs are to be members of the units they support as civilians.

The solution to this problem depends on the characteristics of the FTS position. MTs whose civilian jobs are comparable to their military positions should be treated differently than MTs whose jobs lack this comparability. Option 7.1 would eliminate the conflicting demands by ruling out dual status for those filling civilian positions in deployable units that lack comparable military positions. Option 7.2 would eliminate the conflicting demands by requiring the civilian and military positions to be in the same units, thereby ensuring the availability of the MTs upon mobilization.

The second group of MTs who do not deploy with the organizations that employ them as civilians consists of MTs working in nondeploying maintenance activities. Members of this group may be needed by their nondeploying maintenance activities to support the mobilization effort of all the units serviced by the activities. Because these MTs are dual status, however, they must go to their drilling units for mobilization even if their contribution to mobilization would be greater in the maintenance activity.

Options for Problem 7 (MTs employed by nondeploying maintenance organizations)

7.3 Do not allow employees of nondeploying maintenance activities to be dual status.

7.4 Establish nondeploying reserve units located with the maintenance activities and require at least some MTs to belong to these reserve units. The remaining MTs would still belong to deploying units supported by the maintenance activities.

Option 7.3 would ensure the availability of personnel to the maintenance activities during a mobilization. However, these personnel, who are valuable military assets, would be lost to the field. Option 7.4 also ensures the availability of at least some personnel to the maintenance activities. However, in the event of a reserve mobilization, individuals from the nondeploying units could be used as individual fillers when they are no longer needed by the maintenance ac-

tivity. During drill periods, these individuals could be responsible for maintenance training of non-MT drilling reservists.

Reserving selected personnel in the nondeploying maintenance activities would leave a core of experienced personnel to manage the maintenance workload needed to support mobilization. Doing so would also establish in advance which personnel deploy and which remain to support later deploying units, thereby eliminating the burden and confusion of workarounds.

Problem 8

Definition: High optempo units emphasize operating and maintaining unit equipment to the detriment of training part-time personnel.

As discussed in Sec. 2, unit FTS personnel must contribute to a number of readiness- and deployability-related goals, including unit and individual training, operation and maintenance of unit equipment, and maintenance of supplies. The structure and peacetime activities of some types of reserve units may lead to an overemphasis on operating and maintaining unit equipment and maintaining supplies that is detrimental to the training of some groups of part-time reservists. The common element among these units is that they all have relatively high peacetime optempos and operate expensive weapon systems.

We learned of this problem in all of the reserve components, although not in all high optempo units in each component, and we learned of it in connection with all FTS categories. Though this clearly is an important problem, the options for solving it are not clear and thus are beyond the scope of this study. To determine the best strategy for arriving at a solution, it would be beneficial for each service and its associated reserve components to first conduct a thorough investigation of the problem. The following is an overview of what we see as the major parts of the problem.

In aircraft units having both part-time operators and part-time maintainers, there is a much stronger focus on training the operators and operating the equipment than on training the maintainers. Personnel in five of the six flying units we visited told us that the part-time reservist maintenance personnel did not spend enough time working on the aircraft or its components to become very proficient in their skills. This view is consistent with our observations about incentives facing unit commanders (even in the active components). Apparently, generating the peacetime sorties required to train part-

time aircrews is viewed as so important that the full-time personnel are unwilling to reserve part of the maintenance tasks for the part-time maintenance personnel. This problem may feed on itself because, being insufficiently trained, the part-time maintenance personnel are then viewed as unqualified to work on the aircraft. The unit that did not experience this problem was an AFR associate military airlift wing. This wing achieved a high trainer/trainee ratio because wing maintenance was conducted in three shifts per day and the training of reservists was spread over the three shifts.

The FTS implications of increasing the use of part-time personnel to work on aircraft during drill weekends depend on the proficiency of the part-time personnel. More hands-on training may make the part-time personnel skilled enough to contribute positively to the readiness of the aircraft, in which case fewer full-time personnel would be needed.[27] If more hands-on training improves the proficiency of part-time personnel but is not a substitute for the weekday maintenance provided by full-time personnel, no change in full-time manning would be indicated. In either of these cases, FTS personnel must be provided with the incentive to train the part-time personnel—e.g., by tying FTS evaluations to the tested performance of the part-time maintenance personnel. However, it may be that the technology connected with some skills is so sophisticated and difficult that additional hands-on training will be insufficient for maintaining the skill, so that allowing part-time reservists to work on aircraft could degrade aircraft readiness. For these skills, perhaps there should be more full-time personnel and fewer or no part-time reservists.

The conflict in goals for full-time personnel is different for ships than for flying units. Full-time enlisted crew members of a Naval Reserve Force ship told us that they spend very little time training the part-time reservists while the ship is steaming. They said that they are busy with normal watch responsibilities when steaming, leaving them little time to be trainers.[28] Also, because the ship steams during the week with only its full-time crew, full-time personnel do not have much time to develop training plans. They were pessimistic about the ability to bring the part-time reservist crew to full productivity in three months, let alone the couple of weeks the ship might have while steaming to an overseas mission. Basically, the full-time enlisted crew viewed the part-time personnel as untrained bodies who do not

[27]As noted in Sec. 2, some USAR units specifically reserve a portion of their maintenance workload for part-time personnel.

[28]The crew members also said that much of the part-time reservists' drill weekend is taken up by paperwork responsibilities.

help with the workload. Since full-time shipboard manpower requirements are based on the ship's required operational capabilities when the part-time reservist crew is not present (additional manning for drill weekend training is not part of the calculations), the comments made by the crew members are consistent with our understanding of how the full-time manning requirements are determined.

The FTS implications of increasing the hands-on training of part-time ship personnel on drill weekends depend on the strategy adopted. One option would be to specifically detail some part of the full-time crew to train the part-time reservists. This approach would require either more full-time personnel or a reduction in the number of watches full-time personnel stand. Alternatively, the steaming days during the week and drill periods could be reduced to decrease the crew's watch responsibilities and increase the time available for training.

4. RECOMMENDATIONS

The purpose of FTS is to enhance the readiness and deployability of the Selected Reserve forces. The results of our research imply that three broad principles for manning reserve support positions must be adhered to in order to fulfill that purpose:

1. Requirements should be quantitatively related to important unit activities and outputs.
2. The requirements development process should produce alternative manning tables to provide for flexibility and cost effectiveness in manning reserve organizations.
3. No one category of FTS is always best. Management strategies for FTS categories should be developed to reduce the differences in contributions among those categories.

The following recommendations are intended to give specific policy guidance for implementing these three principles.

DETERMINING REQUIREMENTS FOR FULL-TIME SUPPORT PERSONNEL

The reserve components should include the following three steps in their FTS requirements determination process:

1. *Identify the work that should be done.* There are several parts to this process: ensuring that all relevant tasks are identified (e.g., training of drilling reservists), eliminating obsolete tasks, prioritizing the remaining tasks, and allocating those remaining tasks to full- and part-time personnel. Also, each component should identify the workload to be eliminated when authorized manning is less than required. Thus, one part of the quantitative process of estimating the full-time manpower required to accomplish the workload should be the development of a crosswalk between workload and manning that indicates the achievable workload for each level of authorized manning.
2. *Identify alternative organizational and manpower structures equally capable of completing the work.* The components organize the support of reserve units in very different ways. The reserve components need to share information so that a successful organizational structure in one component can be considered by the other components. Within each organizational

structure, the components should develop the capability needed to regularly generate alternative mixes of skills and experience levels equally capable of accomplishing the support workload.

3. *Estimate the cost of each alternative structure and select the least costly one.* The choice among alternative, equally capable FTS structures should be determined by cost. However, cost estimation must go beyond official pay rates to consider how the personnel system would actually provide the personnel and even whether the called-for experience and grade mix can be obtained.

MANAGEMENT STRATEGIES FOR FULL-TIME SUPPORT PERSONNEL

The following management strategies are recommended.

Wherever the full-time and drilling responsibilities cannot be aligned, full-time personnel should not be allowed to fill mobilization positions. It is our observation that the administrative responsibilities of FTS personnel, especially in USAR and ARNG units, conflict with their drill-weekend training responsibilities. These conflicts degrade readiness and should not be allowed.

AC personnel should be assigned only to FTS positions in which their knowledge and expertise of active component training and doctrine can benefit the Selected Reserve. It is a common view that assigning AC personnel to reserve units can enhance the readiness of those units. Although experienced AC personnel assigned to reserve units can enhance unit training, there are many positions in which those personnel provide no greater benefits than AGRs or MTs. Thus, with regard to Army reserve components, the substitution of AC personnel for AGR personnel as the number of AGRs is drawn down should be guided by this recommendation.

Authorizations should be set aside for full-time reserve personnel who rotate among assignments and attend professional military education courses between assignments. These authorizations are commonly termed *individuals accounts*. Their establishment forces the components to explicitly identify which positions in units and other organizations are to be filled.

The peacetime chain of command in units should be consistent with the military operational chain of command. Reversals in chain of command only occur in units with MTs. Establishing consistency requires aligning military and civilian grades.

FTS personnel filling mobilization positions should be required to satisfy the physical requirements of those positions.

MTs and AGRs doing the same work should not be in the same units. In components that have both MTs and AGRs, these categories should be segregated by type of orgaization. There are advantages and disadvantages to having both MTs and AGRs in the same component. Career MTs tend to remain in service longer than career AGRs, so it is advantageous to use MTs for jobs in which technical expertise and experience are valued more than physical stamina (e.g., aircraft maintenance). The opposite is true for jobs requiring physical stamina. However, having both categories requires dual personnel-management and compensation systems and can result in morale problems when AGRs and MTs are present in the same units. Also, many, perhaps most, positions cannot easily be categorized as appropriate for one category over the other.

The components should resolve all potentially conflicting mobilization demands for MTs. MTs who are civilian employees of *deployable* units should be members of those units and only those units. At least some MTs whose civilian employment is with *nondeployable* maintenance organizations should not be assigned to deployable units.

Implementing these management strategies involves selecting among the options presented in Sec. 3 (and any additional options developed in each reserve component). Some of the options presented increase the substitutability of different categories of FTS personnel. For example, increasing the number of assignments that selected AC personnel are given in the reserve components (option 6.1) would make these individuals closer substitutes for AGRs and MTs. Changing civil service retirement for MTs to induce them to retire much earlier (option 5.3) would make MTs closer substitutes for AGRs. Other options simply replace one category of FTS personnel with another—e.g., options 3.1 and 3.2 restrict classes of positions to either AGR or MT (with no explicit preference for one or the other).

CHOOSING THE MIX OF FULL-TIME SUPPORT CATEGORIES

Because we do not know how the components might implement the management strategies, we can only tentatively identify classes of positions that should *not* be filled by one or more categories of FTS personnel. In most instances, it is easier to identify which category/job matches are poor than which match is best. Thus, we can identify some classes of jobs that should not be filled by AC personnel and

other classes of jobs that should not be filled by AGRs, MTs, and/or CIVs. These positions are characterized by job requirements that preclude one or more FTS categories from performing well in them or by factors that make one or more categories unavailable to them.

Tables 2 through 6 give the criteria used to rule out FTS category/job matches for the reserve components. The characteristics of the positions are listed, and an ✖ indicates the restrictions they imply for FTS category/job matches. These tables assume that each component's existing FTS categories are a given.

Please note that these tables are not complete. They do not incorporate the additional options each component may adopt to implement the management strategies, and they do not include additional job characteristics, specific to each component, that we have not considered. Each component should extend the tables to incorporate its own options and job characteristics. FTS positions should be described according to the characteristics, and the tables should be used to rule FTS category/job matches either in or out. For example, Table 2 indicates that only AGRs should fill a USAR or ARNG job in which both physical condition and knowledge of the reserve environment are especially important.

When fully developed by each reserve component, these tables should be used in conjunction with alternative organization and manpower structures to choose the mix of FTS personnel categories for reserve organizations. Each alternative structure will have an associated set

Table 2

Criteria for Ruling Out FTS Category/Job Matches: USAR and ARNG

Position Characteristic	AGR	MT	AC	CIV
Requires currency and expertise in active component training and doctrine	✖	✖		✖
Requires specialized knowledge of reserve component environment			✖	
Requires that workweek skills also be valuable in wartime				✖
Good physical condition especially important for wartime job		✖		✖
Dual-status personnel hard to obtain		✖		

of positions and position characteristics that should be matched against the tables for guidance about the mix of FTS personnel categories.

Table 3

Criteria for Ruling Out FTS Category/Job Matches: AFR[a]

Position Characteristic	MT	AC	CIV
Requires currency and expertise in active component training and doctrine			✖
Requires specialized knowledge of reserve component environment		✖	
Requires that workweek skills also be valuable in wartime			✖
Good physical condition especially important for wartime job	✖[b]		✖
Dual-status personnel hard to obtain	✖		

[a]Because the few AGRs in the AFR are only in the higher headquarters and other nonunit activities, they are not included here.

[b]If flight physicals ensure that pilots are in good physical condition, this exclusion does not apply to MT pilots.

Table 4

Criteria for Ruling Out FTS Category/Job Matches: ANG

Position Characteristic	AGR	MT	AC	CIV
Requires currency and expertise in active component training and doctrine				✖
Requires specialized knowledge of reserve component environment			✖	
Requires that workweek skills also be valuable in wartime				✖
Good physical condition especially important for wartime job		✖[a]		✖
Dual-status personnel hard to obtain		✖		

[a]If flight physicals ensure that pilots are in good physical condition, this exclusion does not apply to MT pilots.

Table 5

Criteria for Ruling Out FTS Category/Job Matches: MCR

Position Characteristic	AGR	AC	CIV
Requires currency and expertise in active component training and doctrine	✖		✖
Requires specialized knowledge of reserve component environment			
Requires that workweek skills also be valuable in wartime			✖
Good physical condition especially important for wartime job			✖
AGR personnel hard to obtain	✖		

Table 6

Criteria for Ruling Out FTS Category/Job Matches: USNR

Position Characteristic	TAR	AC	CIV
Requires currency and expertise in active component training and doctrine	✖[a]		✖
Requires specialized knowledge of reserve component environment		✖	
Requires that workweek skills also be valuable in wartime			✖
Good physical condition especially important for wartime job			✖
TAR personnel hard to obtain	✖		

[a]Enlisted personnel only. Officers rotate through active component assignments.

Appendix

COPING WITH A REDUCTION IN ARMY RESERVE COMPONENT AGRs

The 1991 DoD Authorization Act directed a reduction in the number of Army reserve component AGRs beginning in FY 1992. The reduction is to be from 39,543 in 1991 to 27,690 in 1997, which represents a 30 percent cut. If these AGRs are not replaced by other FTS personnel, there will thus be a 15 percent reduction in Army reserve component FTS manning. The significance of this reduction depends on how much, if any, the Army reserve components decrease in size during the same period, and whether AGR strength will be cut further if the sizes of the Army reserve components are reduced.[1] The significance also depends on desired readiness levels for Army reserve component units. While further Congressional action may modify the requirement, it seems clear that a strategy is needed to cope effectively with any resulting requirement.

A reduction in the average full-time manning per unit is likely to have deleterious effects on the training and materiel readiness of Army reserve units. A number of factors lead us to believe that the Army reserve components are already undermanned in FTS personnel: our discussions and observations during our visits to USAR and ARNG units and to units in the other reserve components, comparisons of manning strategies and percentages of full-time personnel across reserve components, and survey results on factors affecting unit readiness.[2]

The Authorization Act allows the Secretary of Defense to replace the AGRs with AC personnel, but does not necessarily provide additional active component end strength for that purpose. Whether the number of AC personnel supporting the USAR and ARNG should increase depends on what must be given up in the active Army in

[1]To set the context for the directed reduction in the number of AGRs, Congress, in the same Authorization Act, increased the Army reserve component end strength for FY 1991 by 10,000 over that for FY 1990.

[2]See David Grissmer, "Perceived Constraints to Unit Readiness: Evidence from the 1986 Survey of Reserve Forces," Glenn A. Gotz and Robert M. Brown, *Proc. Colloquium on Total Force Management*, N-3110-FMP, RAND, forthcoming.

order to provide the additional personnel. In any event, AC personnel should not simply replace the lost AGRs; there must be significant changes in how support is provided to units. Based on the problems and options identified in Sec. 3, we suggest the following strategy.

AC personnel should be placed in positions that draw on their knowledge of current active component doctrine and training. This guideline may mean not assigning all of the replacement AC personnel to units. For example, attaching additional AC personnel to readiness groups rather than to company- and battalion-level organizations would allow those personnel to function purely as trainers and not get caught up in the day-to-day administrative work of those organizations. The advantage of the readiness groups is that they have an existing structure for making effective use of active component trainers. The additional AC personnel in readiness groups should be dedicated to training the troops rather than training the trainers (the current readiness group mission).

Those AC personnel assigned to companies, battalions, and brigades should be given positions in which they can directly apply their MOS skills. For example, at the company level, AC personnel are much better suited to filling supply sergeant positions than training or readiness NCO positions, since the latter are administrative positions requiring knowledge of the reserves and non-MOS skills that AC personnel will not have acquired. Alternatively, FTS personnel could be organized into teams similar to the Marine Corps I&I staffs. The principal responsibility of AC personnel assigned to these teams would be training drilling reservists.

This strategy may yield a net loss in full-time personnel assigned to company- and battalion-level organizations. Part of the loss would be offset by additional active component trainers attached to readiness groups or other organizations. However, an integral part of the strategy must be the reduction of the administrative workload at the company and battalion level, which can be done via two methods. First, as discussed in Sec. 2, workloads should be prioritized and the least important work eliminated. Second, centralized administrative support centers, perhaps similar to AFR CBPOs, should be established to consolidate administrative work outside combat units. Much of the remaining administrative workload in units should be done by CIVs, especially the administrative work that is no longer the units' responsibility when the units mobilize.

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