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MILITARY MANPOWER

REQUIREMENTS REPORT

FOR

FY - 1973

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This report presents the Defense manpower requirements for FY 1973, together with a summary of those factors related to the derivation, justification and explanation of these requirements.

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I

INTRODUCTION

The Defense Military Manpower Requirements Report of the Secretary of Defense is submitted to the Congress in accordance with Public Law 92-129. Because of the vital importance of military manpower and the broad defense issues that surround it, this Report for Fiscal Year 1973 goes beyond the minimum requirements of the law. This is done to improve understanding and thus make the national dialog about these important issues more productive. The time is past when broad and arbitrary changes can be made to defense manpower without affecting the national security posture.

This Report presents the Defense Manpower Requirements for FY 73, together with a summary of those factors related to the derivation, justification and explanation of these requirements. It should be read and used in conjunction with the FY 73 Defense Report to the Congress, submitted by the Secretary of Defense on 15 February 1972. That report contains a discussion of the National Security Strategy of Realistic Deterrence, the basic planning concepts related to implementing that strategy, and a brief summary of the manpower requirements derived from these planning concepts. This Report expands in detail on those manpower requirements.

This Report views the Department of Defense as a system whose final product is national security. It is a complex system, composed of many related parts, each of which contributes to the whole. These contributions, or outputs, taken together, form the final product. To produce outputs, any system needs resources. The Defense system is no different. And the most essential of all resources to the Defense system is manpower.

Overview of Manpower Requirements and National Security Policy

The basic national security objectives of the United States are twofold: the first objective is to preserve the United States as a free and independent nation, to safeguard its fundamental institutions and values, and to protect its people. The second objective is to contribute to the security of other nations with whom we have treaties or whose security significantly impacts upon our long-range security. Moreover, as President Nixon stated in his 1972 Foreign Policy Report to the Congress: "As the world's strongest power, this nation has important responsibilities to its friends as well as unique opportunities for improving global stability. American weakness would make no contribution to peace. On the contrary, it would undermine prospects for peace."

The President of the United States, as Chief Executive and Commander-in-Chief, has the responsibility of setting the broad national security policies and goals of this nation. It is the responsibility of the Secretary of Defense, in consultation with his military and civilian advisors, to

develop a comprehensive national security strategy to round out and implement the security objectives set by the President. This strategy, which is one of realistic deterrence, acknowledges that there are political, fiscal, strategic, and manpower realities, or parameters, which cannot be ignored in developing the defense program. Therefore, the Secretary of Defense, in order to minimize the risks to national security within those constraints, utilizes a total force approach to defense planning and evaluates the relative contributions, actual and potential, of the allied forces and our reserves, as well as our active duty forces.

In addition to the fulfilment of the national security strategy, the manpower required for the forces programmed is influenced by human productivity and by personnel policies. We are moving toward an All-Volunteer Force. This basic objective must be considered in terms of specific personnel policies, such as length of enlistments, nature and length of training, and services to be provided (medical care for dependents, commissaries, etc.). Men cannot be treated like machines and shuttled around on a schedule that would be optimum for meeting force needs but would lower morale or unreasonably disrupt the family lives of the men. The personnel policies we follow have substantial impact on the turnover of personnel in the Defense system and, consequently, on the support manpower we must have to maintain the planned manpower levels in the forces.

So the Services are guided by clear strategic concepts and personnel policies in developing their fiscally constrained force needs. Given a programmed force goal of, for example, x aircraft wings, y divisions, and z ships, the Services are charged with meeting that goal through a combination of equipment, manpower, and training. They must answer such issues as: how many crews are needed; how many men are needed to keep a plane serviced and flying; how much support does it take to keep a combat division in the field; what sort of headquarters does one need to direct the combat elements; what sort of training establishment must be maintained? The Services must address how the required manpower should be distributed into forward deployed units, active CONUS units, and reserve units in order to preserve the capability to deter or to respond to attack in a way whose timeliness is adequate to the threat, yet minimize the expense of maintaining adequate forces.

The Services and the Joint Chiefs of Staff next submit their force and manpower programs to the Secretary of Defense for review and decision on major force and manpower issues. These decisions by the Secretary of Defense represent the Secretary's approved force and manpower programs which, in turn, are the basis for Service preparation of their current fiscal year budgets. The budget submissions from the Services are then reviewed by the Secretary of Defense and the Office of Management and Budget. The decisions made in this budget review process become the basis for the Department of Defense portion of the Federal budget, which is, of course, reviewed and approved by the President.

Analytical Framework

Defense resources (manpower, weapons systems, organized units, and funds) are used in the ten Major Defense Programs. These programs are "major output" oriented (e.g., Strategic Programs include the resources associated with all aspects of strategic nuclear forces). Each program contains units (thus manpower) performing different functions (e.g., flying aircraft, maintaining aircraft, operating bases, etc.) but all having the same goal (i.e., providing sufficient and effective strategic nuclear forces for deterrence). However, many of these functions are common to more than one major program (e.g., base operations are required for strategic, general purpose, and mobility forces programs as well as for the non-force programs such as training and logistics). Since it is important to know how resources are used within each major program, this Report deals with military manpower in terms of major mission and support functions, i.e., Mission Forces, Other Missions, and General Support. 1/

Outline of the Report

In Chapter II we summarize the key policies and strategies established by the President and the Secretary of Defense which form the foundation for the military forces required to fulfill the national security objective. Chapter III describes the various kinds of "Mission Forces" we require, given the threats we face, to implement our policies and strategies. These forces are then translated into the military manpower required to man them. Chapter IV deals with the "Other Missions" which must be accomplished and how they are translated into manpower requirements. The "General Support" manpower required to maintain the programmed force levels is dealt with in Chapter V, followed by a discussion of economic aspects of manpower in Chapter VI. The rationale for forward deployments of our forces and their geographic locations comprise Chapter VII. The final Chapter, VIII, provides a summary of military manpower requirements by mission and by Service together with a discussion of average manyear requirements.

The following tables show the military manpower requirements of the Department of Defense for end FY 73 and the end strength and average strength authorizations required for each Service.

1/ A third important view is the appropriation structure. This structure provides information about the time profile of spending in each program and function (e.g., RDT&E is aimed at an improved defense program well in the future, procurement is aimed at improving and sustaining the program in the nearer future and the operating accounts (military personnel and operations and maintenance) are aimed at current operations). Although the appropriations accounts are not addressed in the Report, a diagram showing the relationship of Major Defense Programs, Major Mission and Support Functions and Appropriations is shown at Appendix A.

DOD MILITARY MANPOWER REQUIREMENTS a/
(Active Duty End Strengths in 000)

	FY 71 (Actual)	FY 72 (Estimated)	FY 73 (Estimated)
Mission Forces			
Strategic Forces	130	130	127
General Purpose Forces			
Land Forces	638	513	516
Tactical Air Forces	167	166	167
Naval Forces	205	206	195
Mobility Forces	72	64	57
Subtotal Mission Forces	1,212	1,079	1,062
Other Missions			
Intelligence and Security	91	75	68
Communications	55	52	50
Research and Development	37	37	35
Support to Other Nations	21	17	27
Subtotal Other Missions	204	181	180
General Support			
Base and Individual Support	580	513	506
Training	550	460	458
Command	138	129	121
Logistics	30	30	31
Subtotal General Support	1,298	1,132	1,116
Total DOD	2,714	2,392	2,358

a/ For the detail requirements by Service, see Chapter VIII.

NOTE: Details may not add to totals due to rounding. This applies to all strength tables throughout the Report. All manpower strengths in the Report are end strengths unless otherwise specified.

FY 73 DEFENSE MANPOWER REQUIREMENTS BY SERVICE
(End Strengths and Average Strengths, 000)

	Army	Navy	Marine Corps	Air Force	Total
Mission Forces	442 (477)[a]	283 (358)	107 (130)	230 (434)	1062 (1399)
Other Mission	52	36	2	89	180
General Support	347 (312)	283 (208)	89 (66)	398 (194)	1116 (780)
Total End Strength	841	602	198	717	2358
Average Strength Required[b]	870	601	198	727	2397

a/ The meaning of the numbers in parentheses is discussed in the paragraph following this table.

b/ See Chapter VIII for detailed discussion of the relationship of end strengths to average strengths.

It is important to note that categorizing manpower by functions gives rise to definitional problems. This is particularly evident in the case of General Support. As is explained in Chapter V, there are three tiers of support: organic, direct mission force, and central support. In the current categorization, the direct mission force support is categorized either with the mission forces or with general support; this varies by Service and function. Thus inter-Service comparisons of support are not valid. As the above table shows, General Support could vary by as much as 337 thousand, depending on the definitions of what functions are to be included in that category. The numbers in parentheses represent an alternative way of viewing manpower which excludes from General Support: base operating support; combat crew training; command and control of Mission Forces; and manpower responsible for maintenance and storage of war readiness materials. These categories of manpower can be considered direct Mission Forces Support rather than General Support. There is a major DOD effort underway to restructure and standardize manpower accounting.

P.L. 92-129 Reporting Requirements

Public Law 92-129 specifies the manner in which the Department of Defense is to explain and justify its force manpower requirements:

> "Such justification and explanation shall specify in detail for all forces, including each land force division, carrier and other major combatant vessel, air wing, and other comparable unit: (A) the unit mission and capability, (B) the strategy which the unit supports, and (C) the area of deployment and illustrative areas of potential deployment, including a description of any United States commitment to defend such areas."

These legal requirements are satisfied by the discussions in Chapters II, III, and VII, which deal with the relationship of forces and manpower to national security objectives and strategy (II and III); force unit missions and capabilities (III); the areas of deployment and potential deployment of our force units (III and VII); and U.S. commitments associated with these areas (III). In addition, for convenience, a set of summary tables which satisfy these reporting requirements of P.L. 92-129 has been extracted and is found at Appendix B.

P.L. 92-129 also specifies that manpower required for "support and overhead functions within the Armed Services" shall be explained and justified. Chapters IV and V of this Report treat these support manpower requirements.

II

KEY POLICY AND STRATEGY STATEMENTS

Two years ago, President Nixon clearly enunciated a policy designed to move this country and the world toward a generation of peace based on the principles of partnership, strength, and a willingness to join in meaningful negotiations. This is the basic policy underlying and driving the National Security Strategy of Realistic Deterrence.

Naturally, our national security strategy does not substantially change each year. The concepts and principles underlying the FY 72 Defense Military Manpower Requirement Report are equally valid for this report. We must, at a minimum, assure that for the decade of the 1970s the United States:

-- Preserves a sufficient strategic nuclear capability as the cornerstone of the Free World's nuclear deterrent.

-- Develops and/or continues maintenance of Free World forces that are effective, and minimizes the likelihood of requiring the employment of strategic nuclear forces should deterrence fail.

-- Pursues an International Security Assistance Program that will enhance self-defense capabilities throughout the Free World, and, when coupled with diplomatic and other actions, will encourage regional cooperation and/or security agreements among our friends and allies.

A. U.S. Nuclear Strategic Policy

The President has set forth criteria for strategic sufficiency of U.S. strategic offensive and defensive nuclear forces. Our objectives derived from these criteria include:

-- Maintaining high confidence that our second-strike capability is sufficient to deter an all-out surprise attack on our strategic forces.

-- Providing no incentive for the Soviet Union to strike the United States first in a crisis.

-- Preventing the Soviet Union from gaining the ability to cause considerably greater urban/industrial destruction than the United States could inflict on the Soviets in a nuclear war.

-- Defending against damage from small attacks or accidental launches.

B. Theater Nuclear Forces

An integral element of our deterrent and our ability to defend

in a theater conflict are our theater nuclear forces. These forces, in conjunction with strategic nuclear forces, deter a Soviet theater nuclear attack and by increasing the uncertainty as to the circumstances in which nuclear weapons would be used help deter a non-nuclear attack. In Asia, theater nuclear forces, in conjunction with strategic nuclear forces, deter Chinese or Soviet theater nuclear threats and may deter conventional attacks as well. Our planning reflects a continuing need to have realistic nuclear options for each theater which do not require sole reliance on strategic nuclear weapons.

C. U.S. General Purpose Forces

The application of basic U.S. strategy to general purpose forces requires that we plan forces which are able concurrently to: (1) either conduct, with our NATO Allies, a non-nuclear initial defense of NATO Europe against a Soviet-Warsaw Pact attack, or conduct, with our allies, a defense against PRC-backed aggression; (2) provide materiel, logistic, advisory, and intelligence support and, if necessary, limited U.S. combat force assistance to our Asian allies against non-PRC-backed attacks; and (3) meet minor contingencies arising elsewhere in the world.

1. NATO

Nuclear weapons alone cannot pose an adequate deterrent to conventional attack. The advent of strategic parity and mutual strategic deterrence between the U.S. and the Soviet Union makes it even more vital that NATO have a credible conventional deterrent to attack by Warsaw Pact forces. Accordingly:

a. Allied forces, including U.S. forces in Europe and reinforcements from the United States, must be capable of a strong and credible initial conventional defense against a full-scale attack, assuming a period of warning and military preparation by both sides. In addition, the immediate combat capability of NATO forces, both U.S. and allied, should also be enhanced to provide greater assurance of defending against attacks made after the Pact gains a lead in mobilization.

b. All NATO partners should contribute their full share to the effort required to maintain an effective deterrent. The U.S. will continue to play a major and key role. But our Allies must also do their part and cooperate in enhancing NATO's conventional force capabilities.

2. Asia

In Asia, our policy is one of helping our allies develop and maintain the capability of defending themselves against threats short of a conflict involving PRC or Soviet forces. We plan for materiel, logistics, and intelligence support, and backup tactical air and naval support. We will have the capability for land force backup should that be required. However, we encourage our allies to develop their own land forces such that U.S. involvement, if any, would be limited. Our allies must accept primary responsibility for non-Chinese, non-Soviet supported contingencies. We will aid them but we will look to the nations threatened to assume primary responsibility for providing the manpower.

We also maintain the capability to assist our Asian allies against a PRC attack with conventional forces, provided we are not fighting in Europe.

3. The Seas

The buildup of the Soviet Navy must also be considered. U.S. and allied forces must be able to protect the sea lanes of communication in the event of a NATO conflict. Moreover, it is our objective to deny the Soviets the reasonable assurance of success should they undertake a conflict at sea.

D. Summary

The Nixon Doctrine requires that we take a total force approach. Accordingly, in considering the spectrum of potential conflict, we will be guided by the following principles in our defense planning:

-- In deterring strategic nuclear war, primary reliance will continue to be placed on U.S. strategic deterrent forces.

-- In deterring theater nuclear war, the U.S. also has primary responsibility, but certain of our allies are able to share this responsibility by virtue of their own nuclear capabilities.

-- In deterring theater conventional warfare -- for example, a major war in Europe -- U.S. and allied forces share the responsibility.

-- In deterring sub-theater or localized warfare, the country or ally which is threatened bears the primary burden, particularly for providing manpower, but when U.S. interests or obligations are at stake, we must be prepared to provide help as appropriate.

III

MISSION FORCES AND MANPOWER REQUIREMENTS

Introduction

The foregoing summary of our strategy provides the framework within which our forces are planned and evaluated. This chapter deals with those forces. Before dealing with the major forces in some detail, however, it is necessary to explain how force size and structure are determined. The first step in the planning-programming cycle is to derive from the broad policies and national security objectives set forth by the President a more concise and specific set of defense planning criteria. For instance, it is not sufficient for force planning to state that U.S. policy is to insure the protection of Western Europe. In order for precise force programming to follow from the strategy, such details as the assumed length of preconflict mobilization must be specified.

The development of this amplified guidance is initiated by the Joint Chiefs of Staff and, through an iterative process with full participation of his military and civilian advisors, results in the Secretary of Defense approved Defense Policy and Force Planning Guidance. This guidance is then sent to the Service Secretaries and the Joint Chiefs of Staff. Once they are provided with the policies in sufficient specification, the JCS and Military Services participate in the force planning process in the following manner:

1. The threat is examined; detailed threat estimates are developed.

2. Against the threat, estimates are made of U.S. and allied forces needed to successfully deter an attack or defend against a potential enemy (i.e., prevent him from being confident that he could achieve his objectives at acceptable cost).

3. The present and future forces and capabilities of our allies are then assessed.

4. U.S. forces and capabilities are also assessed.

5. The combined U.S. - allied capabilities are then compared with the threat and assessed as to adequacy.

6. Our force planning is adjusted, and coordinated with our allies such that our joint capabilities are adequate to achieve our mutual objectives against the threat.

The above steps are performed in an iterative fashion with cooperation among the NSC, the OSD staff, the JCS, and the Services. The Services and JCS initiate, within the bounds of specified strategy, fiscal, and force planning criteria, the mix of forces which will best meet the national security goals. The Secretary of Defense reviews these proposals, using three central criteria: the contributions the forces make to the strategy; the possibility of tradeoffs to increase capability or reduce costs; and the tradeoffs among force structure, modernization, readiness and support. The third criterion merits further explanation.

Divisions, air wings, capital ships and the like, are the most highly visible component of defense capability, and, as such, they contribute heavily to the reassurance of our allies and to the deterrence of conflicts. It is tempting, therefore, to preserve major components of the force structure even though funds are shrinking. But to do so is to run the risk of obsolescence. An example of this in the FY 73 program is the retirement of Navy ships, and thus lower force levels in the near term, in order to fund essential modernization. By about 1975, Navy force levels would begin to rise as the ships currently planned are built and delivered to the fleet.

The readiness of our forces to deploy and to have the capability to fight in accordance with our strategy also demands funds which could otherwise go to force structure or modernization. There is no glamour associated with readiness, and the funds it needs, such as those required for training, equipment maintenance, depot repair, munition stockpiles, etc., are frequently the first candidates for removal when the budget is reduced.

The support necessary for the combat forces to operate as required is another element demanding resources. Support is a vital adjunct to readiness; reductions, while not visible, can sap a combat element of its capabilities.

Mission Forces are divided into two primary categories: Strategic Forces and General Purpose Forces. The following table shows the manpower required for these primary categories as well as for the subcategories which comprise them. It also provides the civilian manpower programmed for Mission Forces for FY 73 for comparative purposes.

DOD MISSION FORCES MANPOWER (000)

	FY 71	FY 72	FY 73	FY 73 (Civilians)
Strategic Forces				
Offensive	88	88	89	2
Defensive	27	26	24	14
Surveillance & Control	14	15	14	2
Subtotal	130	130	127	18
General Purpose Forces				
Land Forces	638	513	516	35
Tactical Air Forces	167	166	167	13
Naval Forces	205	206	195	*
Mobility Forces	72	64	57	30
Subtotal	1,082	949	935	78
Total Mission Forces	1,211	1,078	1,062	96

The remainder of this chapter will deal with the strategies and threat analyses that form the bases for our force and manpower planning. The ways by which force requirements are translated into manpower requirements will be an integral part of this discussion. We first address Strategic Forces with the treatment of General Purpose Forces comprising the final section of the chapter.

Strategic Forces

A. *The Threat*

The primary strategic threat to the U.S. -- the capability of the Soviet Union to deliver long range nuclear weapons against targets in the United States -- has been a matter of grave concern to us. Shown in the table below is a comparison of Soviet and U.S. strategic forces:

STRATEGIC FORCE STRENGTHS

	November 1, 1971		Mid-1972	
	USSR	US	USSR	US
ICBM Launchers	1520 a/	1054	1550 a/	1054
SLBM Launch Tubes	475	656	580	656
Heavy Bombers	140 b/	565	140 b/	531
Total Offensive Force Loadings a/c/d/				
Weapons	2100	4700	2500	5700
Air Defenses				
Fighter-Interceptors	3200	612	3100	593
SAM Launchers	10000	895	10000	839
ABM Launchers	64	0	64	0

a/ Includes SS-11s at MR/IRBM complexes.
b/ Excludes about 50 Soviet tanker and several reconnaissance aircraft.
c/ Data not available for November 1971. Figures are as of mid-year.
d/ Figures for USSR are presented as computed. They should not create an impression of precise intelligence.

Although projections beyond those shown become progressively less certain, especially where they extend beyond the production and deployment lead-times of the weapon systems involved, we must make such projections for future defense planning.

The Soviets have built up their ICBM forces at a rapid rate during the past five years, and as of the end of 1971, had some 1,520 operational launchers and they are continuing to construct new silos. Whether new or modified missiles will be deployed in these silos is not yet clear.

The Soviet ICBM threat is augmented by a substantial nuclear-powered ballistic-missile submarine fleet that is presently the fastest growing element of the threat. The most capable component of this fleet is the Y-class, which, like the U.S. POLARIS, has 16 tubes for launching missiles. There are now at least 25 of these submarines operational -- capable of launching 400 missiles with a range of 1,300 nautical miles. The additional ballistic missile capability in older Soviet submarines gives them a total of more than 500 launchers in the operational inventory. Another 17 Y-class submarines are in various stages of assembly and fitting out. At the current production rate of about 9-10 SSBNs per year, the USSR could develop an operational force of Y-class submarines by 1973 comparable in size to the current POLARIS/POSEIDON force. A longer range submarine launched ballistic missile is under active development. We cannot estimate deployment at this time.

The Soviet intercontinental heavy bomber force remains at around 200 aircraft (including about 50 tankers). Although we believe the Soviet medium bomber force of some 700 aircraft is targeted primarily against the Eurasian area, we cannot ignore the fact that these aircraft do have a one-way mission capability against the United States. A new swing-wing bomber, the Backfire, is undergoing flight tests, but its exact characteristics and future role have not been determined.

With regard to the strategic defensive forces of the Soviet Union, there is extensive deployment of aircraft defenses, as well as an ABM system deployed around Moscow. The Soviets have a large inventory of radars numbering in the thousands and a force of over 3,000 interceptor aircraft. There is a slight trend toward a reduction in the number of these interceptors, but the quality of the force has improved. Four new interceptors have been added since 1964, and these newer models make up a substantial part of the force. In addition, at least four different SAM systems, with about 10,000 launchers, are presently deployed for strategic air defense. There is concern by some of our technical experts that the SA-5 SAM might be capable of adaptation for certain ABM roles.

The Soviets now have four MOSCOW ABM complexes (ABM-1) operational. They are continuing construction of surveillance radars which could be a part of an ABM system, and are actively working on R&D related to development of new ABM system components, including a new missile.

As for the strategic nuclear threat of the Peoples Republic of China, its progress toward achieving an ICBM capability is continuing. We cannot state with confidence just when China will have an ICBM capable of striking the continental United States, but it is estimated that deployment could not occur before 1975, with some 10-20 missiles being deployed by mid-1976.

B. Rationale for Strategic Forces

In planning strategic forces our principal objectives are to meet the military criteria for deterrence, based upon the sufficiency criteria enumerated in Chapter II. To fulfill our objectives in strategic force planning, we strive to maintain a reliable retaliatory force, placing primary emphasis on measures that both reduce our vulnerability to attack and assure our ability to penetrate defenses. In addition, we seek to provide: reliable early warning capabilities to minimize the likelihood and consequences of surprise; appropriate defense forces to protect against accidental or small scale air and ballistic missile attack; and effective and reliable command and control of these forces.

We continue to believe that an effective defense of our population against a major Soviet nuclear attack is not now feasible. Thus, we must continue to rely on our strategic offensive forces to deter a Soviet nuclear attack on our cities. Since we rely on these forces for deterrence, we must insure that they are adequate to convince all potential aggressors that acts which could lead to nuclear attack or nuclear blackmail pose unacceptable risks to them.

Recent analyses of strategic force effectiveness indicate that planned strategic forces should continue to provide an adequate deterrent for the near term. We do have reliable and survivable strategic retaliatory forces, and their capabilities for retaliation today cannot be denied by nuclear attack.

C. Strategic Offensive Forces

The basis for our offensive force planning is the retaliatory capability of these forces. Our forces must be capable of absorbing a surprise Soviet first-strike and still be capable of destroying a significant fraction of the Soviet population and industrial base. To insure high-confidence in our second-strike capability, we plan a mix of mutually supporting forces: land-based missiles, sea-based missiles, and bombers. Such a force mix provides (1) assurance that a Soviet technological breakthrough against any one element will not negate the effectiveness of the entire force; (2) a hedge against widespread failures of any element due to unanticipated nuclear weapons effects; (3) a compounding of Soviet offensive and defensive problems in attempting to defeat or defend against U.S. forces; and (4) reinforcement of the viability of each element by the presence of the other, thereby strengthening the credibility of the total deterrent posture.

Land-based missiles have a high alert rate, quick response capability, reliable command and control, and the capability to cover a broad range of targets.

Sea-based missiles offer dispersion and concealment, pose a threat from several directions with short time of flight, and because of their survivability, are capable of extending responses over a long period of time

Bombers can deliver large payloads with the accuracy needed to destroy hard targets, can restrike targets as necessary, and can provide damage assessment of earlier strikes. They also can perform tasks in non-nuclear war, such as their conventional bombing role in Southeast Asia.

We are continuing the program to deploy MIRVs in our Minuteman and Poseidon missiles. Should part of our missile force be unexpectedly and severely degraded by Soviet preemptive action, the increased number of warheads provided by the remaining MIRV missiles will insure that we have enough warheads to attack essential soft urban/industrial targets in the Soviet Union. At the same time, the MIRV program gives us increased confidence in our ability to penetrate current and projected Soviet ABM defenses, even if part of our missile force were destroyed.

Although we are continuing development work on two new strategic offensive systems, the Undersea Long Range Missile System (ULMS) and the B-1 manned bomber, they will not be deployed in FY 73 and no operational manpower is provided for them.

For FY 73, there are no major numerical changes programmed for strategic offensive forces, shown in the table below:

	FY 71	FY 72	FY 73
Strategic Offensive Forces			
Bombers:			
B-52 (UE) a/	435	397	397
FB-111 (UE) a/	66	66	66
Missiles:			
Titan II	54	54	54
Minuteman	1000	1000	1000
Polaris/Poseidon	656	656	656
Ballistic Missile Submarines (SSBN)	41	41	41
Active Military Manpower (000s)			
Navy	18	18	18
Air Force	70	70	71

a/ Unit Equipment (UE) is the basis for manning aircraft squardons. This is less than the Total Active Inventory (TAI).

D. Strategic Defense, Control and Surveillance Forces

1. Ballistic Missile Defense

The Safeguard Anti-Ballistic Missile Defense System has been and continues to be designed to achieve several objectives against a combination of Soviet and Chinese threats. These include:

-- "Protection of our land-based retaliatory forces against a direct attack by the Soviet Union.

-- Defense of the American people against the kind of nuclear attack which Communist China is likely to be able to mount within the decade.

-- Protection against the possibility of accidential attacks from any source."

We are requesting in FY 73 authority to proceed with the Safeguard deployment at four Minuteman sites, as well as continued development of Hardsite to augment the Safeguard defense of Minuteman if later required.

2. Air Defense

In FY 73 we will maintain air defense forces capable of limited damage in a crisis from deliberate or unauthorized small air attack, restricting the unauthorized overflight of U.S. airspace, and defending the National Command Authority. However, the composition of the air defense forces to carry out these missions will change somewhat during FY 73. We will transfer additional active interceptor squadrons to the Air National Guard in keeping with the total force concept, and we plan reductions in both BOMARC surface-to-air missiles and the Back-Up Interceptor Control (BUIC) sites.

3. Missile Warning and Space Systems

Early warning of ICBM attack will continue to be provided by the Ballistic Missile Early Warning System (BMEWS) radars and the "forward scatter" Over-the-Horizon (OTH) radar system. The 474N system will give improved early warning of SLBM attack due to the addition in FY 72 of a long-range radar along the east coast. Development of the satellite early warning system is underway. This advanced system will provide early warning of ICBM, SLBM, and Fractional Orbit Bombardment System (FOBS) launches and will greatly improve the overall capability of our warning network, especially against both ICBM and SLBM launches.

Satellite tracking and identification will continue to be provided by the existing USAF Spacetrack system and the Navy's SPASUR system, both tied into the North American Air Defense Command and supported by the Space Defense Center for continuous space cataloguing.

4. Command and Control

To provide a much needed improvement in Naval and Air Force communications, and to strengthen the survivability and flexibility of our control and communications to the strategic bomber and SLBM forces, we have initiated in FY 73 a new communications satellite program for air and sea-mobile users - FLEETSATCOM.

In FY 72 funds were allocated to increase the survivability of our airborne VLF communications relay to the SLBM element of our strategic retaliatory force by putting fleet communications aircraft (TACAMO) on airborne status. In addition, we anticipate that in FY 73 improved TACAMO capabilities and changes in operation and deployment will further improve system performance and survivability.

The programmed forces and manpower for the strategic defensive, control and surveillance missions are shown below:

	FY 71	FY 72	FY 73
Strategic Defensive, Control and Surveillance Forces			
Interceptor Squadrons			
Active Air Force	11	9	7
Air National Guard	16	18	20
Surface-to-Air Missile Batteries			
Active Army	21	21	21
Army National Guard	27	27	27
Active Air Force	5	5	0
Active Military Manpower (000's)			
Army	6	7	7
Navy	1	1	1
Air Force	34	33	30

E. Manpower Requirements for Strategic Forces

The manpower required by each Service for the strategic forces discussed above is presented in this section. In addition, a more detailed view is provided of the components of the strategic forces for each Service, and the methodology the Service uses to compute the manpower required for those components is discussed.

1. Air Force Manpower Requirements

a. Air Force strategic offensive forces are a mixture of combat aircraft and intercontinental ballistic missiles assigned to the Strategic Air Command (SAC). SAC's primary mission is to prevent nuclear war through its ability to deliver this nuclear firepower to any part of the world, even if subjected to surprise attack. SAC also has the capability of delivering conventional (non-nuclear) weapons with its aircraft. To perform these missions, there are 26 B-52 squadrons composed of 397 unit equipment (UE) aircraft; 4 FB-111 squadrons composed of 66 UE aircraft; Hound Dog and Short Range Attack Missiles; 38 KC-135 tanker squadrons with a UE of 615 aircraft; 6 Titan missile squadrons with a UE 54 missiles; and 20 Minuteman squadrons with a UE of 1,000 missiles.

Strategic offensive force manpower includes the crews as well as the organizational and field maintenance personnel (depot maintenance is included in the Logistics category), weapons system security personnel, and munitions maintenance personnel required to support the weapons systems. Force manpower also includes the personnel required to man the necessary command posts and mission planning functions of the squadrons and wings. Finally, it includes the remainder of the squadron and wing staffs who perform such functions as staff intelligence, unit training, flying safety, command and administration. See the Tactical Air Forces section for a description of how the manning factors are derived.

b. Strategic defensive forces contain the aircraft and missiles in the Aerospace Defense Command and Alaskan Air Command, supported by the Air National Guard as well as the ground environment systems. These forces are required for the defense of the North American Continent and certain overseas land areas against any aerospace threat. To perform this mission there are 7 F-106 squadrons; 2 EC-121 squadrons; and 10 F-102 squadrons, 4 F-106 squadrons, and 6 F-101 squadrons in the Air National Guard (ANG). The ground environment systems include 3 NORAD Manual Control Centers in Alaska and one in the CONUS, 99 Surveillance Radar sites, of which the Air Force mans all but 26 located in Canada, and 31 Distant Early Warning (DEW) stations primarily manned by contractor personnel.

The manpower for defensive forces includes the crews, the organizational and field maintenance personnel (depot maintenance is included in the Logistics category), weapons system security and munitions maintenance personnel required to support the aircraft and missile weapons systems. For the ground environment systems, manpower is required to operate and maintain authorized equipment as well as to perform some 60 functions directly associated with the system. For example, in the case of surveillance radar, manpower is needed to perform

the following functions: command, administration, radar operations, radar maintenance, radio maintenance, crypto maintenance, refrigeration/air conditioning maintenance, heating systems maintenance, etc. Personnel are also required to man the wing and squadron staffs as discussed in the offensive forces section.

c. Strategic control and surveillance forces are a mixture of strategic offensive and defensive detection, tracking, control, communications and surveillance systems. Although the equipment and manpower for these forces are addressed separately, they are an integral part of our offensive and defensive forces. Control and surveillance (C&S) forces consist of the following aircraft: 1 squadron of SR-71s for reconnaissance; 29 Post Attack Command and Control System (PACCS) aircraft which are used by the Strategic Air Command for airborne command posts, communication relay, and launch control centers, and will take charge should SAC ground facilities become inoperative; and 3 EC-135 aircraft which are the National Emergency Airborne Command post aircraft located at Andrews AFB. The ground environment includes the NORAD Combat Operations Center in Cheyenne Mountain near Colorado Srings which is the nerve center for air defense of the North American Continent; 3 Ballistic Missile Early Warning sites; 8 Submarine Launched Ballistic Missile Detection and Warning sites; 7 SPACETRACK sites consisting of radars and Baker-Nunn cameras, including the FPS-85 phased array radar at Eglin AFB; 9 Over-the-Horizon Radar sites with transmitters in the Pacific and receivers in Europe; the ground data system for the satellite early warning program and portions of the national military command and control system. Finally, C&S forces include communications and command and control support equipment associated with the Strategic Air Command forces.

The C&S manpower is varied because of the numerous one of a kind systems identified above. The manpower associated with the aircraft is based on force levels and activity rates. The ground environment manpower requirements generally are based on equipment authorized and positions which must be manned. However, there are many complications, such as contractor support, internal support, and climate.

Illustrative of the types of functions which are performed by C&S personnel is the operation of the Eglin AFB FPS-85 phased array radar. Radar operations functions include, but are not limited to: computer operations and maintenance; satellite object identification and analyses; radar operations and maintenance; communications operations and maintenance; and refrigeration/air conditioning.

d. Air Force manpower required for strategic forces is shown in the table below along with the TOA for FY 73:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
104	104	102	4.5	22%

NOTE: Throughout the Report, "% MILPERS" represents the amount of the Military Personnel appropriation divided by the TOA amount shown in the table.

The strategic manpower totals shown above represent the number of personnel directly employed in carrying out the strategic mission. There are, however, additional Air Force personnel who support the strategic mission, but are accounted for in General Support manpower programs. These support personnel provide supply support to strategic field maintenance units and food, transportation and military police services. The Army and Navy normally include these personnel in their strategic-direct mission manpower totals.

2. Navy Manpower Requirements

a. Navy strategic offensive forces consist primarily of the 41 Polaris/Poseidon ballistic missile submarines and their 5 supporting tenders. Also included are support personnel who provide technical assistance, material support, and program management.

The ships are manned on the basis of the operating, maintenance, and administrative workloads to which Navy manning criteria are applied. The resulting manpower requirements are expressed in Ship Manning Documents (SMD) for each class of submarine and tender. The development of these SMDs is discussed in detail in the presentation on Naval Forces. For an SSBN, the standard manning is 26 officers and 248 enlisted men (13 officers and 124 men in each of two crews for an SSBN). Manning levels are also provided for ships in overhaul and conversion since a portion of the planned work is accomplished by the crew.

Given these standard factors, the manpower requirements for strategic forces are computed as follows:

Type of Ship	Average Manning Factor	No. of Units	Total Manpower (Thousands)
SSBN	263 a/	41	10.8
Tenders (AS)	1,161	5	5.8

a/ Includes active ships and those in overhaul/conversion. For active ships only, the manning is 274.

Additional personnel are needed to man the support craft (e.g., floating drydocks) and other related activities (e.g., Atlantic Fleet Polaris Material Office).

b. Strategic control and surveillance forces consist primarily of 9 SPASUR sites and 12 TACAMO aircraft (EC-130G).

c. Navy manpower and TOA required for strategic forces is shown in the table below:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
19	19	19	2.4	6%

3. Army Manpower Requirements

a. Army strategic defensive forces consist of CONUS Air Defense forces, the Office of Civil Defense, and the SAFEGUARD system now being developed and deployed. They provide surface-to-air missile units, and supporting facilities to assist in the defense of the United States against hostile air and missile attack. Included are the United States Army Air Defense Command (ARADCOM) NIKE HERCULES batteries (21 active and 27 Army National Guard units), command and fire coordination centers, and the developmental elements of the SAFEGUARD system.

The manpower needs of these forces are arrived at by first determining the number of operating positions needed in each firing unit. Using a standard work week, the number of men needed to operate the system on a continuous basis is calculated. In a similar way, engineering standards are used to estimate the number of maintenance manhours the system will require. These factors are then translated into numbers of men. Finally, using standard factors based on experience, the required numbers of administrative and support personnel (e.g., cooks, clerks) are determined. The sum of these calculations is the manpower requirement for the unit. This number is then set forth in a Table of Organization (TO) which is the official Army manpower authorization document. TO's are periodically audited and reviewed to insure that the original estimates (in the case of new kinds of units) are valid. For example, a TO of a NIKE HERCULES firing battery with 12 launchers consists of the following:

AIR DEFENSE FIRING BATTERY - CONUS

Functional Area	Manpower Spaces
Battery Headquarters	16
Fire Control Platoon	47
Launcher Platoon	58
Security Section	13
Battery Total	134

Additional personnel are needed to man command and fire coordination centers and to provide system-wide supervision.

b. Army manpower required for strategic forces is shown in the table below:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
6	7	7	1.7	4%

General Purpose Forces

The role of our General Purpose Forces is, together with the forces of our allies, to deter war and to defend if conflict occurs. Ready and deployable General Purpose Forces in peacetime have significant value in deterring war. The size and mix of General Purpose Forces are predicated upon two policy judgments which have been in effect for many years. These policies are: (1) that the security of the U.S. and protection of our vital interests require forces for forward deployment and forward defense; and (2) that strategic nuclear forces, in and of themselves, cannot be relied upon to provide a credible deterrent or a reasonable response to the entire spectrum of aggression which we must be prepared to face.

Our General Purpose Forces are sized so that the United States will be prepared for an initial defense of NATO Europe or a joint defense in Asia against PRC backed aggression, and to assist allies in Asia against a non-PRC attack, while providing forces for a relatively minor contingency and for a strategic reserve. In our force planning, we do not attempt to build forces to meet all of these possible contingencies or to become engaged in numerous different areas simultaneously. By sizing our forces to meet certain major threats, we expect to be able to handle lesser threats with the same forces. The two major areas of concern, and of greatest potential threat, are in NATO and Asia.

A. The Threat in Europe and Asia and U.S. Conventional Strategy to Meet It.

1. NATO

Our NATO commitment to the common defense of Western Europe is one of the most significant factors in determining the size of our land and tactical air forces. Based on extensive analysis, three successive Presidents have concluded that a conventional defense of Western Europe against a full scale conventional attack by the Warsaw Pact is essential to our own security interests. Such a defense becomes feasible only with substantial numbers of U.S. forces stationed in Europe, backed up by reinforcement and resupply capability.

The USSR and other Warsaw Pact forces facing NATO are maintained in forward areas with forces immediately ready for combat. These forces are designed to blunt a NATO attack and then seize the initiative. Additional objectives are the maintenance of Soviet influence in Eastern Europe and keeping political pressure on Western Europe. While these forces pose a substantial military threat to NATO, a war is not presently considered likely in Europe. This is based on our assumption that the Soviets are

deterred from attacking NATO because the present size of NATO's conventional forces is sufficient to require that any conventional attack by the Warsaw Pact be a large, mobilized attack. And even after mobilization by both sides, the conventional combat capability of NATO appears roughly commensurate with that of the Warsaw Pact. Given this situation, the Pact military commanders should not have reasonable confidence of attaining their objectives by conventional force or by threat of conventional force. U.S. strategic strength insures that the Soviet Union would have no incentive for launching a first strike against the United States in order to attain objectives in Western Europe or anywhere else. So, across the spectrum of warfare - conventional to strategic - the U.S. and its NATO Allies possess the forces adequate and appropriate for deterring various threats of aggression.

a. The Warsaw Pact Threat

While we do not consider aggression by the USSR likely in the present political climate, the fact remains that the Soviets have a vital interest in preserving the status quo in Central Europe and in retaining their hold on Eastern Europe. A crisis that could lead to a conflict could arise if the political situation substantially changed in a way which threatened the USSR or its hegemony over Eastern Europe, or if a Soviet government saw opportunities for other ways to apply critical pressures on the cohesion of the Alliance. Such a crisis could escalate to hostilities.

Whatever the immediate cause, the crisis could trigger localized hostilities or mobilization by the Pact and NATO. Even at that state, both sides might desire to avoid or extinguish any hostilities.

b. NATO Conventional Defense

NATO, with the current U.S. contribution, has a major conventional capability. This capability is being enhanced significantly by the force improvement actions now being undertaken by each of the NATO countries.

If NATO is to deter the Warsaw Pact from judging that offensive military action, or the threat of such action, is an attractive option during a period of political crisis, the NATO peacetime forces must possess a total capability to provide an effective defense. As long as there is no overall imbalance in strength between the two opposing sides, the Warsaw Pact cannot realistically assume that the initiation of hostilities is an attractive means of achieving some political objective. The current deployment of NATO forces is considered adequate to deny the Warsaw Pact high confidence that a Pact attack in the Central Region[1] would be successful. Finally, the Soviet Navy provides the USSR with the capability to support Soviet initiatives on the northern and southern sea flanks of NATO and to threaten the vital sea lanes to Western Europe. Our two deployed carrier task forces provide a viable deterrent to this Soviet naval threat in the Mediterranean.

1/ The Central Region consists of West Germany, BENELUX, France, and the United Kingdom on the NATO side, and East Germany, Poland and Czechoslovakia on the Pact side. The "Southern Flank" of NATO is comprised of Italy, Greece, and Turkey, while the "Northern Flank" is the Scandinavian countries.

c. U.S. and Allied Cooperation in NATO

The past year has been one of considerable stability in Europe, and of the expansion of cooperation within the NATO Alliance. The Alliance defense has been put on its most solid footing in many years, as a result of the NATO Alliance Defense Study (AD-70) efforts, the desire of the Europeans to show that they are definitely shouldering more of the NATO defense burden, and our own efforts to improve the readiness of our forces in Europe. The Total Force Planning Concept is working in NATO. In addition, NATO has considered a number of diplomatic initiatives toward detente in Europe. The most prominent of these has been MBFR (Mutual and Balanced Force Reductions). The Department of Defense has played an important role in the U.S. and NATO studies and discussions of MBFR, given the special and unique responsibility of Defense Ministers for assuring that our common security is safeguarded.

That our efforts have been reasonably successful in the past year is, however, no reason for complacency. The common coordinated force improvement must be sustained, because we see no slackening of Warsaw Pact defense efforts.

The NATO AD-70 study moved from the phase of study into the phase of implementation this past year. Ministers of Defense endorsed the priority areas which had been proposed to them for the further implementation of AD-70 recommendations. Both U.S. and Allied improvements are to be directed into these areas. During the next year, we will continue our discussions of the most efficient and cooperative ways to introduce improvements in these areas into NATO forces. The U.S. has taken several important initiatives in this regard, especially in electronic warfare and maritime surveillance capabilities.

d. Negotiations

On MBFR we have, together with our NATO Allies, stressed the critical need for insuring that MBFR continues to receive the most searching examination possible within our respective governments. We are determined that Allied decisions on MBFR be based on thorough preparation and full consultation. Our common purpose in MBFR must be to maintain the security of the Alliance and enhance the stability of the military situation in Europe. We are considering in our studies a combination of reductions plus constraints and verification provisions, which, arrived at through a carefully phased negotiation, may in fact be the key to an acceptable approach.

e. Burden Sharing

While the primary burden-sharing efforts in NATO are directed toward mutual improvement of our military forces, we have also recently concluded a very satisfactory offset agreement with the Federal

Republic of Germany. The agreement will cover fiscal years 1972 and 1973, and will amount to more than $2 billion over the period. In establishing this amount, the particularly large separate German contribution to the $1 billion European Defense Improvement Program (EDIP) was taken into account. A key new element of the agreement is a program for the rehabilitation of barracks and other facilities used by U.S. forces in Germany. Germany will make available over $180 million for this program.

We also welcome the recent agreements on exchange rates which we have reached with our major Allies. This should permit a more stable economic relation between us and alleviate U.S. balance of payments problems.

f. Allied Improvement Efforts

Our NATO Allies are fulfilling their end of the bargain whereby the U.S. would maintain and improve its forces in Europe given a similar approach by them.

The EDIP program of $1 billion over five years, announced in December 1970, is being rapidly implemented. Over two-thirds of the total program of aircraft survival measures (i.e., shelters and other facilities) is already the subject of definite NATO programming or implementation action. Action on all special national force improvements and the $79 million inter-alliance aid project announced as parts of EDIP are also going ahead on time.

But EDIP is only a small part of the total European contribution to the Alliance. For the year 1972, almost all of our Allies are planning significant increases in their defense budgets. At current prices the total planned increase for 1972 is over $1 billion, without counting certain likely supplementary budget appropriations to meet further rises in costs. Our Allies in the last few years have also taken important steps to modernize the structure and equipment of their forces. Many of these steps are in consonance with the priorities established in the AD-70 study, and the Allies are also engaged in re-examining and where necessary, re-shaping their ongoing defense programs to fit those priorities. In any case, they have important programs for the modernization of their forces.

Our Allies have made clear that the maintenance of their force levels and their extensive improvement programs are worthwhile because of the continued U.S. commitment to NATO defense, given the high quality of U.S. forces, the critical part they play in NATO defense plans, and their link with U.S. nuclear deterrent power. Our Allies have also made clear that efforts to achieve sufficient defense capabilities is a necessary corollary to realistic negotiations on security and cooperation in Europe.

g. Improvements to U.S. Forces in Europe

The U.S. is also making a strong effort to maintain and improve its forces in Europe. During the past several years, manpower shortages and personnel turnover have caused readiness problems for U.S. forces in Europe. In the past year, we raised the priority of our European forces for personnel, and the units are now close to 100% of authorized manning. Perhaps of even greater importance is the fact that the turnover of personnel in our Army units will ease in FY 73, thus reducing turbulence. In addition, we are taking steps to improve combat readiness of U.S. units in Europe through increased training, enhanced equipment maintenance, and better facilities.

Modernization of the equipment of U.S. forces is also progressing well. In the first instance, we are making significant improvements in our anti-armor capabilities. The TOW anti-tank guided missile is being introduced in significant numbers now, and the smaller DRAGON missile will follow. We plan to introduce the M60A2 tank with stabilized guns and SHILLELAGH missile launchers with a new laser range finder. We will equip two Armored Cavalry Regiments with additional M-551 SHERIDANS, also equipped with the SHILLELAGH missile. Our program to replace gasoline-powered armored personnel carriers with new and improved diesel models is nearing completion. We plan to deploy the LANCE missile to Europe as scheduled.

As for our tactical air forces, we have about completed conversion of F-100 aircraft to F-111 and F-4. We have already built over 300 aircraft shelters and should finish the program with over 400 by the end of calendar 1972. We are steadily increasing logistics stocks and improving unit manning. The same kind of progress applies to our electronic warfare capability. Finally, we hope to decrease force vulnerability by increasing the number of available dispersal bases and thus reduce wartime air base loading.

2. Asia

The United States is a Pacific power, and as such must recognize and accept its responsibilities in the area. We seek to do so as a partner, as one of a group of concerned nations acting in concert. It is our objective to support our allies and fulfill our treaty commitments in the context of the Nixon Doctrine.

We do not plan for the long term to maintain separate large U.S. ground combat forces specifically oriented to the Asian theater alone, but we do intend to maintain strong air, naval and support capabilities. To serve as a deterrent and to support our allies, we continue, of course, to maintain balanced, forward deployed ground, air and naval forces in the Asian theater. However, we expect to continue to emphasize the strengthening of the military capabilities of our friends and allies, as we move toward Nixon Doctrine peacetime deterrent forces.

In Asia it has been our policy to seek progressively to develop the capability and commitment of Asian allies to assume a greater share of deterrence and defense against enemy attack. Our primary objective is to help our allies develop and maintain the capability of defending themselves against both internal and external threats. To date, the total force concept is progressing in Asia, as it is in NATO. Our Asian allies are doing more for themselves as envisioned in the Nixon Doctrine, and they are contributing more heavily. The U.S. effort in assisting our allies is directed toward the following goals.

-- Assure allied capability to control insurgency.

-- Assure allied ground capability to defend against non-PRC threats.

-- Assure allied air and naval capability to defend against non-PRC threats.

-- Increase allied capability to contribute ground forces for defense against PRC threats.

In broad terms, the present security situation in Asia looks like this:

a. In Northeast Asia

(1) The Threat. The North Koreans appear committed to a strategy of developing a "revolutionary struggle" in the South. The primary danger in this area is that major hostilities might result from miscalculation or overreaction in an increasingly tense situation.

(2) Meeting the Threat. Our security assistance investment is being amply repaid, as the Koreans have made good progress in improving their armed forces, particularly the ground forces. Problems do remain, and the South Koreans continue to require our material assistance. The South Korean air force, with such old planes as the F-86, is on the verge of obsolescence. We, therefore, are asking the Congress to support continued security assistance to South Korea.

b. In Southeast Asia

(1) The Threat. (This addresses only the threat in the mid and late 70s, after Vietnamization has been completed.)

The situation in Southeast Asia in the 1970s is much more difficult to predict and U.S. force requirements are a good deal less certain because:

-- The threat is believed to be logistically constrained in Southeast Asia, but the road capacity to move supplies is uncertain.

-- The level of insurgency we can expect is not known. It is estimated that insurgency levels which do not receive significant foreign support should be within the capabilities of our allies using police forces and militia alone.

(2) Meeting the Threat. Because of environmental conditions and the limited land LOC, a conflict in SEA probably would not involve the continuous-front warfare anticipated in Europe. Military operations would more likely be carried out with relative independence over a broad area and concentrated in only a few canalized routes. In many areas, the opposition may include guerrillas as well as enemy forces, with no secure rear areas and no clearly defined lines of contact. The possible range of U.S. and allied forces required to meet specific contingencies is too broad to make meaningful estimates at this time.

c. U.S. Forces for Asia

We currently plan forces to provide materiel, logistics, and intelligence support, and backup tactical air and naval support for our Asian allies. We plan only a limited backup ground force capability for non-Chinese, non-Soviet supported contingencies. We also maintain the capability to assist our allies against a PRC attack with conventional forces in Asia provided we are not fighting in Europe. In the event of a conflict in Asia, we would draw on those forces in CONUS maintained either for a NATO conflict or as part of our unallocated strategic reserve, if needed. By calling Reserve and Guard forces to active duty, we would rebuild our capability to meet our NATO commitment. In broad terms, therefore, our long-term policy places more reliance upon our allies, and does not require us to support large U.S. ground forces earmarked solely for Asia.

3. Sub-theater Conflict, Contingencies, and Strategic Reserves

We must face the prospect that conflicts running from localized insurgency or guerrilla warfare to the type of conventional attack which North Korea itself could mount against South Korea will continue to threaten the security of our friends and allies through the 1970s. We classify such potential conflicts separately from large-scale conflicts directly involving the Soviet Union and the Warsaw Pact, or the PRC. Such a distinction between theater and sub-theater conflict may be considered artificial by some, particularly in the case of an intense localized conflict such as the war in Southeast Asia. It is important, however, because under the Nixon Doctrine, as exemplified by the Vietnamization Program, we believe that our allies can and must increasingly bear the primary burden for planning to cope with sub-theater and localized conflicts.

However, as we move in this direction under President Nixon's Strategy for Peace, there may be situations where only U.S. capabilities would provide the flexibility of action which may be necessary in the future. Therefore, in addition to the forces required for a NATO or Asian conflict, we also maintain added forces for limited contingencies elsewhere in the world. This force also provides a hedge (a strategic reserve) should the actual force requirements for theater conflict exceed those we estimate would be required. We also maintain certain special mission forces for specific needs in selected areas.

B. Land Forces - Forces, Capabilities, Missions, and Manpower

1. Summary of Forces

Land forces manpower and the number of divisions manned for FY 71-FY 73 are shown below:

LAND FORCE LEVELS

	End-FY 71		End-FY 72		End-FY 73	
	Div	Support Increments	Div	Support Increments	Div	Support Increments
Army						
Active						
Deployed	8	13 1/3	5 2/3	8 2/3	5 1/3	8
CONUS/Hawaii	5 2/3	6	7 1/3	6 1/3	7 2/3	6
Reserve	8	24	8	27	8	27 2/3
Total Army	21 2/3	43 1/3	21	42	21	41 2/3
Marine Corps	Div. Forces		Div. Forces		Div. Forces	
Active						
Deployed	1		1		1	
CONUS	2		2		2	
Reserve	1		1		1	
Active Military Manpower (000)						
Army	562		432		435	
Marine Corps	74		78		79	

By the end of FY 72, the active Army force structure will consist of 13 active division equivalents: 3 armored, 4 mechanized, 2 2/3 infantry, 1 1/3 airmobile, 1 airborne, 1 tricap division, and division-size

support increments. In addition, six separate special mission and school brigades and three armored cavalry regiments will be in the active Army. The Marine Corps will have three active divisions and three active wings. Reserve land forces will include eight National Guard divisions and one Marine Corps Reserve division. Additionally, there are 25 separate Army Reserve brigades and regiments which provide roughly the equivalent of 1/3 division each. The above forces, excluding the separate brigades, combine to form total U.S. land forces of 25 divisions (21 Army and 4 Marine) at the end of FY 72, compared to 31 2/3 at the end of FY 69, the height of the Vietnam War.

By the end of FY 72 we will have completed the planned reduction in major land forces from their levels at the Vietnam peak. The end-FY 73 force structure will be the same as at end-FY 72, with the exception of one less active support increment and one less separate brigade.

The force structure described above, while austere, should suffice to implement the Nixon Doctrine and the national security strategy of realistic deterrence in the foreseeable future, provided that: (1) we succeed in increasing the capability of our Reserve and Guard forces; (2) we continue to increase the capability of both Active and Reserve forces through planned modernization programs; (3) our allies continue to improve their forces; and (4) sufficient warning is achieved and mobilization is effected.

2. Capabilities of Land Forces

Two of the major land forces categories are division forces and special mission forces. The Army division forces are the combat divisions and additional units required within a theater of operations to support the sustained combat operations of the divisions. These division forces are the deployable expeditionary forces of the Army designed to provide the bulk of combat power for a land war. For planning purposes the size of an individual division force is set at 48,000 structure spaces. Each division force is separated into a division and two support increments; some of the support increments are in the Reserve Forces. A division contains about one-third of the manpower in a division force and the support increments about one-third each. Marine divisions, augmented with combat support and combat service support units from the force troops, are the basic ground elements of the Marine Amphibious Forces (MAF's), integrated air/ground teams.

a. Army Divisions

The division is a major administrative and tactical unit which combines in itself the needed arms and services required for sustained combat. It consists of about 16,000 men. U.S. Army land forces contain the following types of divisions:

(1) Armored and Mechanized Divisions

These divisions have the most tanks and anti-tank weapons which are important to counter the armor-heavy forces of the Warsaw Pact. They also have great battlefield mobility, important in a NATO war. Mechanized forces have also been used in Asia. At end-FY 73 the U.S. will have 4 1/3 mechanized divisions and 3 armored divisions. Of the total 7 1/3 divisions, 4 1/3 represent our peacetime deployments in Germany, with the rest in CONUS: one in Texas, one in Colorado, 2/3 in Kansas, and 1/3 in Georgia.

(2) Infantry Divisions

These divisions have much less anti-armor capability than mechanized and armored divisions, and fewer vehicles. They can operate in more difficult terrain, and require less transport to deploy than the heavy divisions. At end-FY 73 the U.S. will have two and two-thirds infantry divisions.

(3) Airmobile Division

The airmobile division is roughly an infantry division with helicopter mobility. It is best for controlling large land areas against relatively unsophisticated enemies and because of its high tactical mobility would be useful in NATO. At end-FY 73 the U.S. will have one airmobile division. The division is stationed in Kentucky.

(4) Airborne Division

The airborne division is capable of parachute assault, which makes it the most lightly equipped and most quickly deployable division in the Army. The 82nd Airborne Division in North Carolina is the primary quick reaction Army force at the President's disposal.

(5) Tricapability Division

The Army will have one tricap division stationed in Texas in FY 73. This is currently an experimental division which combines armored and mechanized capability with that of airmobile infantry and air cavalry. The testing being performed will indicate whether the airmobile capability developed in Southeast Asia can be effectively used in conjunction with mechanized and armored forces for the defense of NATO.

b. Army Support Increments

Most non-divisional units in division forces are of battalion size or smaller, but are aggregated to division size increments for planning. The support increments contain both combat and support units.

(1) Combat Units

Although most of the combat power of the division force is found in the division itself, the support increments also contain substantial combat forces, such as armored cavalry regiments, independent artillery battalions, surface-to-surface missile battalions, separate air defense batteries, and helicopter combat units. The reserve support increments contain separate brigades and armored cavalry regiments.

(2) Support Units

The support units of a division force provide the capability to support the combat units in sustained combat operations. These units provide engineers, communication, maintenance, ammunition and fuel supply, military police, and the many different kinds of personnel services required to sustain combat forces. Some of the support increments for the active Army are in the National Guard and Army Reserve and not in the active Army. This is possible because fewer support units are required to support the initial stages of combat. Reserve support units can train and deploy much faster than can reserve divisions.

c. Marine Divisions

The Marine division, as a part of a MAF, has the capability to make forced entry amphibious assaults. Two of our MAFs can be tailored for immediate commitment to high intensity combat to provide this capability. The third active MAF, or elements thereof, would be available simultaneously for immediate commitment to meet the requirements for minor contingency operations worldwide and to provide assistance to allies as required. In FY 73 we will have three active Marine Divisions. One division, the ground combat element of II MAF is located in North Carolina. Battalion landing team (BLT) size elements of this division are forward deployed continuously to Guantanamo Bay, Cuba and with afloat air/ground task forces in the Mediterranean and Caribbean. Another division, the ground combat element of I MAF is located in California. The third division, the ground combat element of III MAF, is located in the Pacific Ocean area (Okinawa and Hawaii). Two BLT size elements of this division are afloat continuously in the Western Pacific.

d. Special Mission Forces

Special mission forces make up the other principal category of land forces. These include units tailored for such missions as initial defense of the Panama Canal, Alaska, and Berlin. They also provide surface-to-surface and surface-to-air missile support in Europe and the Pacific and the defense of CONUS and Alaska against enemy air attack.

e. Combat to Support Balance

We recognize the importance of achieving an optimum balance of support troops to combat troops consistent with combat requirements. In FY 73 the programmed Army forces will move towards a lower ratio of support to combat forces. An indicator of the emphasis placed on combat power within active division forces can be obtained by examining the number of divisions and support increments in the active forces. The table below shows the breakdown of divisions and support increments from FY 70 to FY 73:

SUMMARY OF ACTIVE ARMY DIVISION FORCES

	FY 70	FY 71	FY 72	FY 73
Divisions	17 1/3	13 2/3	13	13
Support Increments	27 1/3	19 1/3	15	14
Percentage of Divisions in Division Forces	39%	41%	46%	48%

The percentage of the force that is made up of divisions is shown continually increasing from 39% in FY 70 to 48% in the FY 73 baseline force, reflecting an increasing emphasis on combat power in the active division forces for this time period.

A further measurement of the relative emphasis the Army places on combat power is the ratio of total Army manpower to the number of divisions. This ratio is shown below:

RATIO OF ARMY MANPOWER TO NUMBER OF DIVISIONS

		FY 70	FY 71	FY 72	FY 73
Ratio:	$\frac{\text{Total Army Manpower}}{\text{Number of Divisions}}$	76,300	82,200	66,200	64,700

Although the ratios above are at a very aggregate level, they do reflect that in our land forces the proportion of combat units increases as the Army returns to a peacetime footing and relies more heavily on Reserve backup for support forces. A more complete discussion of the entire combat/support issue is included in Chapter V.

3. Regional Missions for Land Forces

a. NATO

The most demanding contingency for U.S. land forces is in NATO Europe. Our land force requirements are largely determined by planning for U.S. and allied conventional forces which, after a period of warning and mobilization, would be able to defend NATO Europe against a conventional attack by the Warsaw Pact. We plan to continue in FY 73 land force deployments to Europe at their FY 72 level of approximately 199,000, as follows:

Combat Forces	
4 1/3 Divisions	65,000
2 Armored Cavalry Regiments	6,000
Berlin Brigade	3,000
Other Combat Units a/	17,000
Missile Forces	15,000
Total Men in Combat Units	106,000
Support Forces	
Units Supporting Divisions	71,000
Strategic Communications, Intelligence, and Security	11,000
DOD/Joint Activities, Free World and Other Services Support, and Others	11,000
Total Authorized Army Strength	199,000

a/ Artillery, Combat Aviation, and Combat Engineers.

In the event of a major conflict with the Warsaw Pact we plan on deploying many of our active divisions. The length of the NATO frontage to be defended, the European terrain and road network, and the size and high degree of mechanization in Pact forces all combine to make possible rapid advances by attacking forces. For this reason, the early arrival of large U.S. reinforcements is critical to a successful defense of NATO Europe.

b. Asia

We do not plan for the long term to maintain separate large U.S. ground combat forces specifically oriented to Asia. If a large land war involving the U.S. should occur in Asia we would be prepared to mobilize, and would initially use our non-NATO-committed forces and, if required, portions of the forces based in the U.S. and earmarked for NATO. In the future, we expect the emphasis in Asia more and more to be placed on U.S. support to our allies who themselves will provide the required ground forces manpower.

4. Determination of Manpower Requirements

Based on the forces and missions described above, the Army and Marine Corps determine manpower requirements for those forces as follows:

a. Active Army

Active division forces consisting of 13 divisions and 14 support increments would have a wartime strength of over 400,000 men and would receive the support of additional reserve support increments with mobilization.

The manning level of each unit will vary and is determined by the mission of that unit and the readiness needed to fulfill that mission, given the unit's peacetime location. Under current readiness concepts a division is available to load for deployment after personnel and equipment fill, training, and packing. Availability of divisions for deployments is a function of peacetime manning level. Manning combat units at less than 90% significantly restricts the amount of training the unit can carry out in peacetime.

As was stated earlier, the principal requirement for U.S. land forces is the initial defense of NATO. We plan on the assumption that there would be a few weeks of warning time before a NATO war started. Thus our forces stationed in Europe are manned to allow them to be substantially ready for combat.

Because support units are smaller than divisions and generally require less time to get ready, and further because many support units do not have to be deployed until some time after the division is deployed, the average manning for support increments is slightly lower than for divisions. Depending upon the size of the unit involved, certain units within the 16,000-man support increment may be manned at higher than 90%. and some at lower. Support units which are not needed in the early stages of mobilization are in the Reserves. All Reserve Component units are manned at 98% in peacetime.

The table below summarizes the active Army manpower and TOA required for land forces:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
	Manpower		TOA	% MILPERS
562	432	435	7.0	53%

b. Marine Corps

In general, Marine Corps manpower requirements are based on:

(1) The approved force level; that is, the structure which is to be manned. For the Marine Corps, this consists of the three Divisions, three Wings, and two force troops commands which provide combat, combat support, and combat service support units.

(2) The number of manpower billets required in each of the units which make up the major forces authorized. This is determined by the operational capability required, and is related to the equipment necessary to perform the tasks or missions which are envisioned.

Military manpower requirements are not based on a fixed standard work week, but on operational requirements to achieve the mission capability of that unit. As part of a continuous review of manpower needs, a major task analysis study for all occupational fields is currently in progress to update manpower needs in relation to job requirements. This study is serving to better identify manpower requirements and training requirements.

The manpower requested for the Marine Corps in FY 73 would permit a manning level worldwide for the Fleet Marine Force which will make these units substantially combat ready. The manpower required by the Marine Corps for land forces is:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
74	78	79	1.0	61%

C. Tactical Air Forces - Forces, Capabilities, Missions, and Manpower

The threat discussed earlier poses a wide range of potential conflict situations in which military response might be required. The tactical air force structure described in this section provides to the National Command Authorities a variety of options, ranging from small, conventional deployments to large scale conventional and/or tactical nuclear operations. These forces are being structured to provide the responsiveness, positive control, and overall capability best suited to provide a wide variety of options to meet the requirements of our strategy.

The flexible nature of tactical air forces enables elements of the combat and supporting forces to be deployed as a package to meet threats to our national interests at the level of theater or subtheater conflict. These contingency force packages can be configured to expressly counter threats to our allies or for minor contingency situations where rapid reinforcement or force presence may be required.

1. Summary of Forces

In order to meet the tactical air portion of national strategy goals, the forces shown on the following page are planned for FY 73. Forces for FY 71 and FY 72 are shown for comparison. As can be seen in this table, all military assets are considered in force planning. For example, the Air National Guard and Air Force Reserve tactical aircraft are included in the table, and are an integral part of planned deployments for a NATO conflict.

U.S. TACTICAL AIR FORCES
(Authorized Active Inventory For End Fiscal Years)

	FY 71	FY 72	FY 73
Active			
Air Force Tactical Fighter Wings (TFW)	21	21	21 3/4
Air Force Reconnaissance Squadrons	14	13	10
Navy Fighter/Attack Squadrons	67	67	70
Navy Reconnaissance Squadrons	14	13	10
CVA/CVAN/CV	14	14	14
Marine Tactical Air Wings	3	3	3
Marine Reconnaissance Squadrons	3	3	3
Reserve			
Air National Guard Fighter/Attack Squadrons	27	33	36
ANG Reconnaissance Squadrons	11	6	6
Air Force Reserve Fighter Squadrons	0	1	3
Navy and Marine Corps Reserve Fighter/ Attack Squadrons	21	19	19
Active Military Manpower (000)			
Navy	60	60	65
Marine Corps	27	27	27
Air Force	79	80	75

2. Capabilities of Tactical Air Forces

Tactical aircraft have the capabilities to carry out a variety of missions in a conflict. These capabilities include close air support, interdiction, air defense (both fleet and area), reconnaissance, and special purpose missions.

a. Close Air Support

Close air support sorties are flown against enemy forces in close proximity to friendly forces. Primary goals of close air support are: (1) to destroy or neutralize enemy forces close to friendly forces; (2) to attack these enemy forces rapidly after requests for close air support; and (3) to attack other enemy targets near the front line which cannot be engaged by other means due to time, location, or other constraints. CAS systems should be able: (1) to deliver accurate, lethal fire; (2) to provide fire support responsive to the ground commander; (3) to survive in likely enemy air defense environments; (4) to maneuver well enough to employ proper tactics on various targets; and (5) to carry sufficient ordnance in quantity and variety.

b. Interdiction

On land, interdiction sorties (deep or strike -- Air Force and Navy) are flown against a wide range of targets, including (1) enemey forces maneuvering behind their front lines, (2) enemy lines of communication, (3) enemy air bases, and (4) storage and production facilities in rear areas. At sea, interdiction sorties are flown against enemy surface ships, such as surface-to-surface missile launching patrol boats and cruisers and surfaced submarines. Fighter escort sorties are provided in support of interdiction raids

c. Air Defense

Air defense sorties are flown to protect friendly air, sea, or ground forces from enemy air attack. These sorties provide defense of rear areas (depots, ports, lines of communication, troop staging areas, and air bases), troops on the front line (from enemy close air support), the Navy fleet, and convoys.

d. Reconnaissance

Reconnaissance aircraft provide surveillance of enemy activity through day and night photography, side looking radar, and infra-red imagery.

e. Special Purpose

Special purpose aircraft are used in electronic warfare (detection of and counter-measures against enemy electronic emitters), special operations forces (for example, specifically tailored for Southeast

Asia), tactical air control (enroute and terminal control of tactical aircraft), and airborne early warning (airborne search radar).

3. Missions of Tactical Air Forces and Employments

a. Missions

The mission of tactical air forces is to assist other forces in countering air, ground, and naval threats. For example, those portions of tactical air capability directed against the enemy's air threat are referred to as the counter air mission. This mission is primarily a combination of air defense capabilities with a portion of interdiction capabilities.

b. Employments

(1) NATO - Center Region

In the NATO center region, the Soviets have a numerical superiority in tanks. NATO has developed a substantial numerical advantage in ground attack aircraft that can assist in countering a Pact armored assault. Moreover, NATO ground attack aircraft possess better all-weather, range, and payload capabilities which could be used to advantage against Pact armored units to the extent that NATO tactical air forces can achieve local numerical parity or air superiority over the battle zone. The Warsaw Pact has developed a tactical air force with primary emphasis on air defense and combined this force with an extensive ground radar network complemented by anti-aircraft guns and surface-to-air missiles. Most of the center region U.S. tactical air forces would be provided by the Air Force.

(2) NATO - Flanks

The NATO flanks have generally not received as much analysis as the Center Region. The problem of the NATO Southern Flank (Greece, Turkey, and Italy) is compounded by the Middle East situation. Particularly in these areas, the mobility of our tactical air forces, including the carriers on the southern flank, provide the U.S. with the capability of meeting unexpected thrusts.

(3) Asia

Both the Air Force and the Navy would provide tactical air support for conflicts in Asia. Because of the limited number of land bases, the utility of carriers is enhanced. Other limitations include the distance for resupply and the possibility of conflict in two theaters, Northeast Asia and Southeast Asia. Tactical air provides the U.S. with the ability to provide rapid and significant support in Asian conflicts without involving substantial land forces. In addition, tactical air forces provide flexibility against the spectrum of conflicts possible in these areas.

(4) Sea Lane Protection

Our dependence on sea lines of communication necessitates their protection. The Navy, and to a lesser extent the Air Force, plan to provide tactical air for sea lane protection. The mission involves defending both military and support shipping from bombers with air-to-surface missiles and cruise missiles fired from surface ships and submarines. By using carriers and bases in both the U.S. and allied countries, U.S. tactical air can provide the defensive umbrella necessary to maintain the sea lines of communication essential in both NATO and Asian conflicts.

(5) Contingencies

The high degree of readiness maintained by the Marine Corps enhances its value in contingency situations. These forces could also be used in Asia or NATO conflicts. Marine Corps tactical air is an integral part of the Marine Amphibious Force.

4. Determination of Manpower Requirements

The tactical air forces described above represent a demand for manpower from the Air Force, Navy, and Marine Corps. The methods for determining the levels of manpower and the actual manpower required are as follows:

a. Air Force

To perform the tactical air forces mission there are 21 3/4 tactical fighter wings consisting of 72 squadrons; 10 reconnaissance squadrons; 11 special operations squadrons; various Air National Guard and Air Force Reserve aircraft; and, basically, three control systems.

Tactical air forces manpower includes the crews, organizational and field maintenance personnel (depot maintenance is included in the Logistics category), the weapons system security personnel, and the munitions maintenance personnel required to support these weapons systems. Also included are personnel required to man the necessary command posts and mission planning functions of the squadrons and wings. Finally, manpower is needed for the squadron and wing staffs which perform such functions as staff intelligence, unit training, flying safety, command and administration. In the case of the Overseas Air Weapons Control System, manpower is required to operate and maintain the radar equipment and control the aircraft for this system located in Europe. For the Tactical Air Control System and the Southeast Asia Tactical Air Control System manpower is required to operate and maintain assigned equipment as well as the Forward Air Control and Air Liaison Officers necessary to support Army and allied ground forces.

The manpower requirements for a tactical air wing are derived from a logical building block approach, starting with the individual aircraft and progressing through the squadron and wing levels. To illustrate how this is done, the following example for the A-7 aircraft is provided:

Crews: The crew composition of the A-7 is one pilot. The crew ratio is 1.1 per aircraft. Crew ratios are based upon: combat readiness requirements; sufficient capability to maintain aircrew proficiency required to accomplish the mission; lead time required to adjust or alter procurement and training of aircrews; operational requirements (type of aircraft and when flying, i.e., nighttime, daytime, 24-hour alert, etc.); and estimates of time lost due to sickness, leave, TDY, and other causes. The 1.1 crew ratio means that for a squadron composed of 24 aircraft, 27 pilots would be required in primary crew positions.

Maintenance: The key determinant in computing maintenance manpower requirements is the maintenance manhour per flying hour factor. This factor is developed by examining maintenance manhour data that are collected daily from each maintenance activity in the Air Force. The maintenance manhour per flying hour factor for the A-7 is 25 hours; i.e., it takes 25 productive direct manhours of maintenance to produce one flying hour. The maintenance manhour factor times the number of flying hours each aircraft must generate per month equals the total productive direct maintenance manhours that must be made available for each A-7 each month. To this must be added manhours for maintenance of the aerospace ground equipment (e.g., starters, generators, etc.) associated with the weapon system. On the average this requires an additional 15% of the maintenance manhours. The manhour requirement developed thus far pertains only to the worker or "wrench turner." It is also necessary to add a factor for maintenance supervision. This factor varies by weapon system and by deployment configuration but Air Force-wide the factor amounts to 10% of the manhours required to maintain the weapon system and the aerospace ground equipment.

The manhour requirements for maintenance, computed in the above manner, are converted to authorizations by dividing by the number of hours an individual is available for direct productive work in an average month. Air Force surveys have determined that an individual who is on a 10 hour shift, six days a week, is available for work 218 hours per month. 1/ This number excludes the time lost for sickness, leave, training, etc. Further, surveys have determined that he is directly productive, doing actual "wrench turning," 60% of this time, with the remaining time devoted to indirect requirements such as standby, cleanup, etc.

1/ Maintenance manning for tactical air forces is calculated on a 60 hour wartime work week using wartime flying hours.

To summarize the requirements computation for the A-7:

25	Productive Direct Maintenance Manhours/Flying Hour
x 50	Flying Hours
1,250	Maintenance Manhours/Aircraft
x 24	No. of Aircraft/Squadron
30,000	Maintenance Manhours/Squadron
x 1.15	Ground Support Equipment Maintenance
34,500	Manhours for Maintenance of Aircraft and GSE
x 1.10	Maintenance Supervision (Planning, Scheduling, Quality Control)
37,950	Total Manhours Required

218	Hours Available for Work/Month
x .60	Productive Direct Manhour Factor
130.8	Direct Productive Manhours/Month

$$\frac{37{,}950}{130.8} = 290$$

Productive Direct Manhours Required / Productive Direct Manhours Available Per Man = Spaces Required for Squadron Maintenance

290 ÷ 24 = 12.1 Maintenance Spaces Per Aircraft

Munitions: These requirements are based on management engineering criteria. Included in this area is the manpower required for: loading, unloading, arming and dearming of committed munitions; inspection, testing and maintenance of all aircraft weapons release systems; maintenance, ammunitions loadings, activation and deactivation of aircraft gun systems; and a 30 day capability for munitions maintenance, storage and handling. The factor for the A-7 is 7.29 manpower authorizations per aircraft.

Supervision and Wing Staff: These requirements are based on management engineering standards and criteria. Included are the men required for squadron supervision and the squadron contribution to wing staff. These personnel perform such jobs as command, operations, planning and scheduling, flying safety, quality control on aircrew training and proficiency, etc. Each A-7 squadron requires 16 Officers and 35 Airmen.

Weapons Security: These requirements are based on manpower determinants. Security personnel are required for entry control, close and distant boundary support, security alert teams, etc. The requirement for an A-7 squadron has been determined to be 1 Officer and 46 Airmen.

Flying Hours: 50 hours per month (Wartime)

APPLICATION OF FACTORS

(24 aircraft, each flying 50 hours per month, with personnel working 10 hours a day and 6 days a week.)

	Officers	Airmen	Total
Crews: 24 x 1.1	27	0	27
Maintenance a/: 24 x 12.1	7	283	290
Munitions a/: 24 x 7.29	4	171	175
Wing/Squadron Staff	16	35	51
Weapons Security	1	46	47
Manpower Required for Typical A-7 Squadron	55	535	590

a/ Manhour factor converted to manpower with 2½% as officers.

Manpower requirements for other types of squadrons are calculated in a similar manner. The following table shows complete breakdown of Air Force manpower required for all tactical air active squadrons:

TACTICAL AIR SQUADRON MANPOWER

	OFF	AMN	T/M
A-7 squadrons-typical squadron	(55)	(535)	(590)
Element total	495	4,795	5,290
F-105 squadrons			
24 UE typical squadron	(85)	(621)	(706)
12 UE typical squadron	(58)	(392)	(450)
Element total	143	1,013	1,156
F-4 squadrons			
18 UE typical squadron (SEA)	(80)	(558)	(638)
18 UE typical squadron	(64)	(486)	(550)
24 UE typical squadron	(85)	(625)	(710)
24 UE typical squadron (dual mission)	(103)	(835)	(938)
12 UE typical squadron	(57)	(365)	(422)
Element total	3,880	28,202	32,082
F-111 squadrons			
18 UE typical squadron	(76)	(576)	(652)
20 UE typical squadron	(81)	(630)	(711)
24 UE typical squadron	(94)	(730)	(824)
Element total	1,071	8,309	9,380
RF-4 squadrons			
18 UE typical squadron (SEA)	(96)	(617)	(713)
18 UE typical squadron	(78)	(458)	(536)
Element total	798	4,740	5,538
Special Operations squadrons			
10 UE A-1 squadron	(43)	(176)	(219)
16 UE AC-119K squadron	(155)	(553)	(708)
18 UE AC-130 squadron	(364)	(1,355)	(1,719)
10 UE CH-53 squadron	(53)	(168)	(221)
Typical squadron (mixed acft/UE)	(82)	(260)	(342)
Headquarters	(114)	(72)	(186)
School	(29)	(17)	(46)
Element total	1,343	4,173	5,516
Tactical Drone Support squadrons			
Typical squadron	(55)	(258)	(313)
Element total	55	258	313
EB-66 squadrons			
Typical squadron	(95)	(307)	(402)
Training squadron	(30)	(120)	(150)
Element total	125	427	552

The following table summarizes Air Force manpower and TOA required for tactical air forces:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
79	80	75	3.3	22%

The tactical air manpower totals shown above represent the number of personnel directly employed in carrying out the tactical air mission. There are, however, additional Air Force personnel who support the tactical mission, but are accounted for in General Support manpower programs. These support personnel provide supply support to tactical field maintenance units; bare base support to deployed units; and food, transportation, and military police services. The Army and Navy normally include these personnel in their tactical-direct mission manpower totals.

b. Navy

To perform the Navy's tactical air forces mission there are 14 attack aircraft carriers (CVA/CV) and 70 attack/fighter aircraft squadrons. Each carrier air wing consists of a mix of aircraft, including fighters, attack planes, reconnaissance aircraft, and support aircraft such as inflight tankers. Aircraft of a similar type are organized into squadrons. For each type of aircraft, criteria are established for the number of aircrews and maintenance personnel needed to keep the plane flying a specified number of hours per month in a fashion similar to that previously described for the Air Force. To these requirements are added personnel for administration and support. These total manpower requirements are expressed in a Squadron Manning Document for each type of aircraft squadron.

As an example, the manpower for an F-4B squadron is developed as follows:

Aircrew per aircraft: 2 (1 pilot, 1 radar intercept officer)

Aircrewmen needed for a 12 aircraft squadron: 32 (provides additional aircrews in order to fly the required number of sorties with sufficient crew rest between sorties - crew ratio is 1.33).

Maintenance men: 220

Administration & Support: 55

F-4 Squadron total: 307

The specific manpower engineering techniques used to determine above manpower levels and to develop the requirements for aircraft carrier crews are discussed in the Naval Forces section.

The total requirement for Navy tactical air forces is then computed by multiplying the individual unit factors times the number of units in the force. A few additional personnel spaces are also provided to achieve a continuous maintenance capability for Naval Reserve tactical air units.

The manpower and TOA required for Navy tactical air forces is shown in the table below:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
60	60	65	3.1	17%

c. Marine Corps

The Marine Corps has programmed 3 attack wings to carry out its tactical air forces missions. The manpower requirements for these forces are determined by essentially the same method as the Navy since the same types of aircraft are involved. The manpower requirements for the Marine Corps tactical air forces are:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
27	27	27	.7	27%

D. Naval Forces - Strategy, Missions, Threat, Forces, Capabilities, and Manpower

U.S. Naval force planning, particularly as it applies to the sea control mission, is less tied to specific theater assumptions than land or tactical air forces. Accordingly, the strategy and threat for naval forces were not discussed earlier in the NATO and Asia sections of this Report.

1. Strategy and Missions

The principal sea control missions required of the Navy are:

a. In a NATO war U.S. and NATO Allied forces should be able to protect U.S. Naval forces at sea, military support shipping, and an austere level of economic support shipping.

b. In addition, in a NATO war U.S. and NATO Allied forces should be able to indefinitely maintain a minimum necessary flow of supplies from the U.S. to Europe against a maximum Soviet conventional interdiction effort.

c. Furthermore, in a NATO war U.S. forces in the Pacific should be capable of supplementing the forces of our Pacific allies to insure that a minimum necessary level of supplies can be maintained against expected threats to the sea lanes.

Other sea control missions can be met with forces planned for a, b, and c above. In addition to the above considerations, the Navy possesses a capability with its deployed forces to respond to crisis situations anywhere in the world with fully supported air and amphibious forces.

2. Threat

a. The Soviet Navy possesses a large submarine force including both nuclear and diesel long-range attack submarines capable of extended deployments on a worldwide basis. Included in the Soviet submarine force are several classes of cruise-missile launching submarines which appear to have been developed to counter the U.S. and allied surface naval forces.

b. Soviet Naval aviation possesses long-range, air-to-surface missile-armed bombers which can be projected against both naval forces and shipping in the sea lanes.

The Soviets also possess a sizable force of long-range reconnaissance (BEAR) aircraft. These aircraft have the range and endurance to be employed into either the Atlantic or Pacific.

Although Soviet surface forces have limited access to the open ocean, they have been increasing their overseas deployments in peacetime and developing the capability for sustained operations in the open ocean. Soviets surface forces do not possess sea-based tactical aircraft and, consequently, lack strong air defense capability except when within range of land-based interceptors. As a result they are most suitable for surprise attacks at the initiation of hostilities or defensive operations when within interceptor range of Soviet bases.

3. Planning Assumptions

Planning for general purpose naval forces begins with estimates of U.S. and allied land and tactical air forces needed to meet planned objectives in various areas of the world. These estimates include the requirement for U.S. Naval "projection" forces -- tactical air forces from carriers and amphibious forces. The amount of military support shipping that must be provided depends on the U.S. and allied forces committed in each theater.

Next, the economic support shipping required to sustain the countries allied with the United States during the conflict must be determined since this shipping may need protection. Generally an austere level of economic support is envisioned rather than the full peacetime level. In addition, a standown of economic shipping is considered during the early stages of a conflict to allow shipping to be organized into convoys and to allow naval forces to counter the high threat to the sea lanes anticipated early in a conflict.

With "projection" forces and military and economic shipping requirements determined, support force and sea control (or "protection") force requirements can be developed. Support forces (replenishment ships, tenders, and repair ships) are sized to provide required endurance at sea of naval forces and to provide logistics and material support to naval forces from forward sites.

Sea control forces are sized to provide protection to other naval forces and mercantile shipping against the surface, submarine, and air threat in the areas where naval operations are planned and shipping must operate. The appropriate level of sea control forces depends on such factors as the number of forces or ships requiring protection, the size and sophistication of the expected threat, and the geography involved. A mix of sea control forces with different types of weapon systems, both land-based and sea-based, are employed. This mix of forces provides defense in depth, takes advantage of geographic "choke points," and achieves a realistic balance among area and barrier-type forces and active point-defense forces.

In sizing our naval forces we must take into consideration more than just the level of wartime activity in any one land theater. This is because the Soviet Union may extend hostilities at sea into areas far removed from a concurrent land war where the U.S. and our allies must maintain essential sea lanes. It is necessary, therefore, to plan U.S. Naval forces worldwide.

Finally, in planning U.S. Naval forces, the total capabilities of both the U.S. and our allies must be considered. U.S. allies possess significant naval capabilities, including forces and equipment that have been obtained, financed, or modernized with U.S. assistance. Although few allied ships or aircraft are comparable to the most recent high technology U.S. forces, many of the allied forces are as capable as less recent U.S. forces.

An important factor in considering the capabilities of our allies is the coordinated planning required to operate U.S. and allied forces together in a timely manner in wartime. It is important that we and our allies perceive the threat in the same way in order for U.S./allied operations to be effective. Continuing U.S./allied dialog and operations are designed to improve coordination and communications between the U.S. and our allies.

4. Naval Forces and Their Capabilities

The following table shows the naval forces and manpower programmed for FY 73:

U.S. NAVAL FORCES

	FY 71	FY 72	FY 73
Forces			
Carriers (CVA and CV) a/	14	14	14
ASW Carriers (CVS)	4	3	2
ASW Air Groups (CVSG)	4	4	4
Attack Submarines			
Nuclear	51	57	60
Diesel	50	38	27
Surface Combatants	224	226	207
Amphibious Forces (MAF)	1 1/3	1 1/3	1+
Underway Replenishment Forces	59	60	61
ASW Patrol Squadrons	24	24	24
Total Active Ships	702	657	594
Active Military Manpower (000)			
Navy	205	205	194
Marine Corps	1	1	1

a/ Manpower for carriers and associated air wings is included in tactical air forces.

Naval forces are designed to perform projection and sea control missions in support of U.S. strategy. Naval projection forces include attack aircraft carriers which can project tactical air sorties ashore and amphibious assault forces which can project land forces ashore. Sea control forces include submarines; surface combatants, and tactical and ASW aircraft (both land-based and sea-based) which provide area and point defense to naval forces and mercantile shipping at sea. Support forces are provided to sustain naval operations at sea and provide mobile logistics and repair support from advanced bases. Briefly the major naval forces are:

a. Carriers

(1) Two types of carriers comprise U.S. carrier forces: attack carriers dedicated to tactical air missions and ASW carriers dedicated to broad ocean ASW. The concept of a multi-purpose carrier, or CV, which combines the attack and ASW carrier missions has been developed, and all our carriers are now scheduled for conversion to the multi-purpose role.

(2) Attack carriers contribute to tactical aircraft sortie requirements (as discussed in the section on tactical air forces). They have proven particularly valuable in areas where the U.S. does not have land bases or when land bases are overcrowded. This is exemplified by the employment of carriers in the Korean War and off Vietnam when the carriers were not opposed. In direct confrontation with the Soviet Union, strong Soviet surface, air, and submarine naval forces could pose a serious threat to U.S. carrier forces requiring careful judgment in their employment. Accordingly, the Navy is continuing to improve defensive capability of the carrier forces to allow greatest possible latitude in their use.

(3) Attack, Multi-Purpose and ASW carriers contribute to the control of vital sea lanes. ASW carriers employ both fixed wing aircraft and helicopters to conduct ASW missions over broad ocean areas and to augment point ASW defense around naval forces and vital shipping convoys. All three types of carriers provide air defense against enemy bomber and reconnaissance aircraft employed against naval forces and convoys. They also provide aircraft to search out and attack enemy surface Naval forces should these forces pose a threat.

b. Submarines

General purpose submarines are designed primarily to perform anti-submarine warfare (ASW) missions. Because of their unique capabilities, wartime employment of submarines is envisioned in advanced ASW barriers across strategic "choke points" in the transit routes of enemy submarines between homeports and patrol areas. The roles, missions, and characteristics of future submarines are now under study by the Navy.

c. Surface Combatants

(1) Surface combatants comprise a wide spectrum of surface ship types that perform a variety of missions. In this category are cruisers, including the nuclear-powered LONG-BEACH; conventional and nuclear-powered frigates; "destroyer types," including the new SPRUANCE-class destroyer; and small ocean escort ships, including the KNOX-class destroyer escort.

(2) The principal mission of surface combatants is to provide point defense and escort forces to other naval forces and convoys. In this role they provide, in conjunction with other sea control forces, protection against submarine and air attack. Some protection against surface attack is currently provided by the conventional guns on most surface combatants. This capability is limited against the threat of Soviet missile-equipped surface ships and will be enhanced significantly when the U.S. surface-to-surface missile system (HARPOON) is introduced into the fleet.

(3) Surface combatants can perform a number of additional missions in combat including shore bombardment, search and rescue, air surveillance and control, offensive and defensive patrol, and naval blockade.

d. Anti-Submarine Warfare (ASW) Aircraft

Air ASW aircraft forces includes both carrier based aircraft (fixed wing and helicopters) and 24 squadrons of land-based P-3 maritime patrol aircraft. These aircraft, like submarines, can be used in a variety of roles in the control of the sea lanes: in advanced ASW barriers; as area search and destroy forces; and as escorts.

e. Amphibious Forces

These forces provide the capability to perform amphibious assaults in support of U.S. NATO and Asian strategies. Equally important, amphibious assault forces provide a high-readiness contingency force for landings with men, equipment, and aircraft integrated for combat. To carry out their missions, amphibious forces generate a requirement for other naval forces for protection (ASW, AAW, anti-surface), ancillary missions (mine warfare, close air support, naval gunfire support), and logistic support (replenishment and repair).

f. Support Ships

Support ships include underway replenishment ships; repair ships and tenders; and tugs, salvage vessels, and miscellaneous auxiliary ships. These forces increases the endurance of naval forces at sea, provide for logistic and material support of naval forces from advanced undeveloped sites, and perform various auxiliary roles. They contribute indirectly to the major missions performed by the Navy.

5. Determination of Manpower Requirements

a. Navy

After determination of the force mix, the associated force manpower is derived on the basis of workload requirements for specific ship and aircraft types. The primary device for measuring the workload is the Navy Manning Documentation Program. Using accepted work study techniques and manpower productivity criteria, the manpower needed to permit a given class of ship or aircraft squadron to perform its mission is established. These manpower levels are reflected in Ship Manning Documents (SMDs) and Squadron Manning Documents (SQMDs) for each type of squadron or ship.

In developing manning documents, the following workload, manpower productivity, and time available for work (i.e, standard work week, etc.) assumptions are used:

Standard work week for enlisted personnel afloat.

At Sea

Watchstander	74 hours
Non-Watchstander	66 hours

In Port

Watchstander	45 hours
Non-Watchstander	41 hours

1-in-6 Duty Rotation Minimum Objective

Standard work week routine:

	Watchstander		Non-Watchstander	
	At Sea	In Port	At Sea	In Port
Watch	56.00	9.33	--	--
Training	2.00	2.83	3.00	3.00
Service Diversions	2.50	3.37	3.00	3.50
Scheduled Work	13.50	28.67	37.50	31.00
Unscheduled Work		.80	22.50	3.50
Total Work Week	74.00	45.00	66.00	41.00

Service diversions include quarters inspections; sick call; and pay line, administrative and judiciary requirements. They are accomplished during normal off-watch working hours and, therefore, deduct from an individual's capacity to do productive work. These factors have been developed from experience, based on work sampling techniques.

A percentage allowance is also applied to basic productive work requirements to reflect those delays arising from fatigue, environmental effects, personal needs, and unavoidable interruptions which serve to increase the time required for work accomplishment.

Application - 20% factor applied to all maintenance transactions

Example - 1.00 Maintenance work required
x .20 Productivity allowance

1 hr. 12 min. allotted to complete transaction

A further time allowance for tool drawing, publications gathering, equipment entry, transaction recording, and put away is also used for preventive maintenance efforts.

Application - 30% applied to all PM transactions

Example - 1.00 PM work required
x .30 Make ready/put away allowance

1 hr. 18 min. allotted to complete transaction

The work week on board a ship at sea under wartime readiness conditions that is used for manpower planning is summarized below:

Watchstander		Non-Watchstander	
74	Available for work	66	Available for work
-56	Watchstanding	-6	Total service diversion
18	Available for maintenance	60	Available for maintenance (includes allowances)
-4.5	Total service diversion		
13.5	Available for maintenance (includes allowances)		

Using these standards, manning documents are prepared for each class of ship, establishing the manpower requirements. These requirements are further subdivided by pay grade to provide the proper mix of skill levels and to provide for command and supervision. Thus, a DDG-2 class destroyer has a manpower requirement of 338 personnel. Of these, 19 are officers, 22 are Chief Petty officers, and 297 are other enlisted grades. One-hundred ninety-five of the 338 men are required to continuously man operational positions, and the remainder are needed for maintenance, administration, and support. Aircraft squadrons are similarly manned based on the air crews, maintenance, and support personnel needed to support the wartime flying rate.

EXAMPLES OF FY 73 NAVAL FORCES MANPOWER

Unit	Average Manning	Number of Units
ASW Carrier	1,630	2
ASW Air Group	950	4
ASW Patrol Squadron	351	24
Attack Submarines	108	87
Destroyers (DD/DDG)	300	140 (35 NRT)
Major Fleet Escorts:		
Cruiser (CG/CLG)	987	8
Frigate (DLG)	413	29
Amphibious Assault Ships:		
Other than LST	416	45
LST	223	20
Underway Replenishment Ships	332	61

The above figures illustrate the planning that is used in developing manpower requirements. The actual budget is based on a detailed analysis by individual ship and aircraft type, with special allowances used for ships in overhaul, conversion, and precommissioning status. In addition to ships and aircraft squadrons, manpower must be provided for such combat support units as Mobile Construction Battalions (Seabees), Underwater Demolition Teams, and Fleet Support Squadrons. These requirements are based on the tasks to be performed in each unit and the assigned missions. All of these individual requirements for each ship, squadron, and combat support unit are then summed to determine the total manpower needed for naval forces, shown in the table below:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
205	205	194	7.2	22%

The total Navy military manpower requirements are also influenced by the necessity for providing shore billets for certain categories of personnel whose skill specialities are not required ashore in sufficient numbers to allow equitable sea/shore rotation patterns. These categories of personnel include such ratings as boilermen, engine and hull specialists, and ordnance personnel. Because currently the time between sea/shore rotation exceeds four years for these categories of enlisted personnel, they are designated as "deprived ratings," and assigned to other productive occupations ashore which do not necessarily require military personnel with their skills. In FY 73 there are about 12,000 of these billets.

b. Marine Corps

The Marine Corps provides security detachments for major Navy ships carrying nuclear weapons. The manpower and TOA required for this purpose is shown below:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
1	1	1	*	100%

NOTE: * - less than .1 Billion.

E. Mobility Forces - Strategy, Missions, Forces, Capabilities and Manpower

1. Strategy

The goal of the total force concept in supporting realistic deterrence is to provide a combination of allied forces and U.S. forces adequate to deter all forms of war. One aspect of this deterrence is the visible ability to bring our forces to bear quickly when it is in our national interest. A major factor supporting this goal is the clear capability, when consistent with our policy, to bring U.S. forces to our allies' aid in time to deter or to counter aggression which they alone cannot meet. One means of achieving such a clear capability would be to maintain an adequate level of U.S. forces in each potential trouble spot. An alternative strategy is to maintain a smaller total U.S. force stationed at central locations and provide mobility forces to deploy them quickly. In fact, the goal of strategic mobility forces is to provide flexibility of deployment so that the overall level of general purpose forces is lower than would otherwise be necessary to constitute a realistic deterrent.

2. Missions

The threats to which U.S. forces must respond, and in turn require lift from our mobility forces, range from a minor contingency, requiring one to two brigades, to a Warsaw Pact attack on NATO. Deployments to a minor contingency can for the most part be accomplished by the active mobility force. In order to meet deployment requirements in response to a Warsaw Pact attack on NATO, or Chinese aggression in Asia, we would rely on full mobilization of reserve forces and large numbers of commercial aircraft and ships in addition to the active forces.

Present planning for the spectrum of possible deployments utilizes principally military and U.S. commercial assets. However, recognizing the considerable lift assets of our NATO Allies, we are beginning to adjust our planning to include their participation in supporting deployments to NATO.

3. Mobility Forces and Their Capabilities

a. Introduction

Mobility forces are comprised of strategic and tactical airlift, sealift, pre-positioned equipment, and mobility support forces including air and sea terminals. Specialized forces such as aeromedical evacuation, aerospace rescue, and air weather service are also included.

The table below displays the current program for selected major mobility force components and manpower:

MOBILITY FORCES

	FY 71	FY 72	FY 73
Airlift			
Active Strategic Airlift (Squadrons/AAI)	17/334	17/339	17/356
Active Tactical Airlift (Squadrons/AAI)	28/549	18/354	17/327
Reserve/Guard Airlift (Units/AAI)	54/323	55/350	51/314
Sealift			
Active Strategic Sealift (Ships)	94	71	69
Active Military Manpower (000)			
Air Force	68	60	53
Navy	3	3	3
Army	2	1	1

b. Airlift

(1) Strategic Airlift: As presently programmed, U.S. strategic airlift resources will provide the basic capability to meet the spectrum of deployment requirements through the 1970s. By the end of FY 73, the full C-5A force structure will be attained and the active strategic airlift force will consist of 4 squadrons of C-5As and 13 squadrons of C-141s. In addition to these military assets, U.S. mobility forces include approximately 330 commercial aircraft in the Civil Reserve Air Fleet (CRAF), 60% of which possess the capability to transport cargo.

In FY 73, we are planning additional adjustment to the resources of our mobility forces to revise the mix of aircraft and aircrews, as well as maintenance and aerial port personnel, in support of our deployment objectives. We have also made adjustments in the ratio of active to reserve personnel in our strategic airlift force by reducing the number of active personnel while increasing the number of reserve personnel in the Associate Units.

(2) Tactical Airlift: In contrast to the strategic airlift force which provides the deployment capability for U.S. forces, tactical airlift provides airlift within the contingency area for U.S. and allied forces. This support includes the movement of unit equipment, resupply, and passengers. In FY 73, our active tactical airlift force will consist of 16 squadrons of C-130E aircraft and one specialized ski-equipped C-130 squadron stationed in Alaska. To replace the active force STOL capability transferred to the Reserve forces and lost due to the VNAF modernization program and replace the aging C-130 force, we will proceed with the Advanced Medium STOL prototype program. This program will result in an operationally suitable prototype aircraft which will provide an option for procurement.

(3) Reserve Airlift: In addition to our increased emphasis on the reserve portion of our strategic airlift force, we have also significantly increased the tactical airlift capability of the reserve forces. The Air Force Reserves will have 17 units equipped with C-130 aircraft and 6 squadrons equipped with STOL aircraft. The Air National Guard will possess 10 units equipped with C-130 aircraft and one specialized C-123 unit in Alaska.

c. Sealift

We rely very heavily on sealift to move the bulk of our equipment and supplies. Massive lift capability is essential. For example, although the equipment for an infantry division weighs only 30,000 tons, the equipment required for the supporting units for the division weighs 86,000 tons. The division and its support units consume supplies at the rate of about 1,300 tons per day when in sustained combat.

In the mid-1970's, without acquisition of new assets, the DOD strategic sealift force of government-owned and long-term chartered vessels will be limited to roll-on/roll-off vessels. To meet wartime needs, DOD must rely almost exclusively on U.S. commercial shipping which can be mobilized under Presidential authority. During a NATO contingency, DOD could also rely on the commercial shipping assets of our NATO Allies, although the timing of their availability is uncertain. In the next several months, DOD will be working with our Allies to develop agreements regarding the availability of these NATO-flag vessels. Despite these U.S. and foreign commercial shipping resources, DOD may require specialized shipping which is not available from commercial sources.

The major DOD sealift policies and programs are currently undergoing extensive review through an interagency examination of military sealift procurement, requirements, and capabilities. Participants, in addition to DOD in this examination, entitled the Sealift Procurement and National Security (SPANS) Study, are the Department of Commerce, Federal Maritime Commission, and Office of Management and Budget. The issues which are to be resolved by the SPANS Study by the end of March 1972 are: (1) possible revision of the competitive negotiated procurement system used to obtain rates for the movement of peacetime cargo under shipping and container agreements; (2) the need to acquire especially designed vessels for a DOD controlled fleet; and (3) the development of a strengthened Sealift Readiness Program which will make available in a timely manner sufficient commercial shipping resources needed to meet the requirements of minor contingencies.

4. Determination of Manpower Requirements

The manpower required to carry out mobility forces missions is determined by each Service as follows:

a. Air Force

Mobility forces perform the strategic and tactical airlift missions of the Air Force, operate the aerial port terminals for the transportation of cargo and personnel, and perform Air Force weather, aeromedical evacuation and aerospace rescue/recovery missions.

Mobility force manpower includes the crews, aircraft maintenance personnel, weapons system security personnel, and airlift support services personnel required to support the forces. The determination of these requirements is in accordance with the procedures described in the section on tactical air forces. Airlift support services manpower is distributed throughout the Military Airlift Command airlift wings, support wings, support groups, and various support squadrons and detachments to provide enroute aircraft maintenance, supply support, and airlift command posts. Force personnel are also needed to man the squadron and wing staffs to perform such functions as unit training, flying safety, and command and

control. In the case of air weather service, it also includes the personnel required to operate base weather units. These manpower requirements are predicated on specific equipment, hours of operation, and mission requirements for each individual location. There is also a manpower requirement to support Army weather needs and the Air Force weather and aerospace rescue and recovery headquarters.

The table below summarizes Air Force manpower required for mobility forces:

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
	Manpower		TOA	% MILPERS
68	60	53	1.2	44%

The mobility manpower totals shown above represent the number of personnel directly employed in carrying out the air mobility mission. There are, however, additional Air Force personnel who support the mobility mission, but are accounted for in General Support manpower programs. These support personnel provide supply support to mobility field maintenance units and food, transportation and military police services.

b. Navy

Navy mobility forces consist, primarily, of the Military Sealift Command (MSC). Since MSC ships are civilian manned, the only military personnel required for MSC are those in headquarters elements. However, also included in mobility forces are the Navy Weather Service and the Navy Oceanography Office. The Weather Service consists of Fleet Weather Centrals at major Navy bases and detachments at other naval air station and operating bases. The manpower requirements are determined by the services provided to the fleet. Using standard work measurement and workweek criteria, the number of men needed to produce the required services is determined. A small number of administrative personnel is also needed to control and supervise these operations.

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
	Manpower		TOA	% MILPERS
3	3	3	*	32%

NOTE: * - less than .1 Billion.

c. Army

Military manpower required for mobility forces consists of those personnel involved in the operation of Department of Army non-industrially-funded water ports in the overseas areas. Personnel provide traffic management services in support of the movement of DOD cargo and passengers within CONUS and to overseas commands. Included are Army elements of the Military Traffic Management and Terminal Service (MTMTS), the DOD single manager for surface transportation.

The bulk of the work force (86%) is civilian. The military manpower requirements are based on the number of terminals to be operated, and the command, control, and management requirements derived from the estimated volume of cargo and passengers to be moved. These factors are reviewed annually, and the manpower needs adjusted accordingly. As an example, the Army terminal at Bayonne, New Jersey is manned with 50 military and 1,090 civilians, for a total of 1,140 personnel.

MILITARY MANPOWER (000) AND TOA ($ BILLIONS)

FY 71	FY 72	FY 73	FY 73	
Manpower			TOA	% MILPERS
2	1	1	*	24%

NOTE: * - less than .1 Billion.

IV

OTHER MISSION FORCES

The "Other Mission Forces" carry out major defense-wide programs under centralized control. These missions include Intelligence and Security, Communications, Research and Development, and Support to Other Nations. The following table shows the military manpower programmed for these missions in FYs 71, 72, and 73 along with the civilians estimated in FY 73 for comparative purposes.

DOD OTHER MISSION MILITARY MANPOWER (000)

	FY 71	FY 72	FY 73	FY 73 (Civilians)
Intelligence & Security	91	75	68	36
Communications	55	52	50	20
Research & Development	37	37	35	84
Support to Other Nations	21	17	27	5
Total Other Mission	204	181	180	145

Intelligence and Security

This category includes the centralized intelligence gathering agencies of the Department of Defense. Their operations are directed primarily toward the development of national or strategic intelligence for use in strategic planning and national intelligence estimates. In addition to their role of satisfying national intelligence requirements, intelligence units also provide some support to tactical commanders. We plan these activities on a completely integrated basis to ensure that there is no unnecessary duplication of effort. As a result of centralized direction, significant manpower efficiencies have been possible without a reduction in intelligence effectiveness. From a level of 91,000 military in FY 71, we plan for 68,000 military in FY 73, a reduction of 25%.

Intelligence resource policies and controls are exercised by the Secretary of Defense. To strengthen this management, a new Assistant Secretary of Defense (Intelligence) was appointed during the past year to improve management of intelligence resources, programs and activities and to readjust from the operational problems of Southeast Asia to the longer term strategic needs. The specific requirements for the intelligence collection activities are established at many levels. The Services establish their requirements for intelligence to support force planning, field operations, such as those in Vietnam and other contingencies, and research and development. The Joint Chiefs of Staff compiles its own intelligence requirements along with those

of the Unified and Specified Commands. These and other strategic guidance issuances from the Office of the Secretary of Defense (OSD) form a basis for budget and manpower allocations. The national intelligence community (the National Security Council, the Central Intelligence Agency and the Department of State) relies heavily on the intelligence resources of the DOD and through the medium of the United States Intelligence Board establishes requirements and priorities for which the intelligence elements of the DOD and Services must apply dollar and manpower resources.

The manning of individual military intelligence units is determined by functional requirements, manning criteria, and engineering standards. These normal manning authorizations are altered from time to time to fit unusual situations. The criteria for these authorizations have been arrived at through experience, and they are modified from time to time as broad missions of the staffs change, as science and technology impacts on the methods and procedures of intelligence, and as actual combat experience requires.

INTELLIGENCE AND SECURITY MILITARY MANPOWER AND TOA
(Manpower in Thousands, TOA in Billions)

	FY 71	FY 72	FY 73	FY 73	
	Manpower			TOA	% MilPers
Army	32	25	20	.4	53%
Navy	18	15	14	.4	28%
Marine Corps	2	2	2	*	93%
Air Force	38	33	31	2.2	13%
Total Intelligence & Security Manpower & TOA	91	75	68	3.0	21%
Military Assigned to Defense Agencies a/	7	6	6		
Total Military Assigned to Intelligence & Security Functions	97	81	74		

NOTE: * Less than .1 Billion.

a/ Military personnel authorized for Defense intelligence agencies are included in the Command category (see Chapter V). To permit a complete discussion of intelligence functions, they are also included in this section.

The total Defense Intelligence Program can be divided into three sub-categories.

1. Consolidated Cryptological Program (CCP) and Advanced Program Support (APS), managed by the Director, National Security Agency.

2. General Defense Intelligence Program (GDIP), managed by the Director, Defense Intelligence Agency.

a. Cryptologic Program

The cryptologic program consists of the resources required to carry out the mission of the National Security Agency which involves the performance of highly specialized technical functions in support of the intelligence activities of the United States. Resources included are those authorized and appropriated by the Congress, for selected intelligence organizations of the Army, Navy and Air Force as well as the National Security Agency.

Detailed management of the cryptologic program is vested in the Director, National Security Agency who has been assigned three basic responsibilities for this purpose under the Secretary of Defense:

(1) organizing, operating, and managing certain activities and facilities for the production of intelligence information;

(2) organizing and coordinating the research and engineering activities of the U.S. Government which are in support of the Agency's assigned functions; and

(3) regulating certain communications in support of Agency missions.

b. General Defense Intelligence Program

The General Defense Intelligence Program complements the Cryptologic Program by collecting intelligence information by human and technical means under the management of the Defense Intelligence Agency. Some of the activities include human collectors managed by the Military Departments. Technical collection includes that intelligence collected by air and ground based sensors such as aircraft and ground based radars.

Communications

This category is made up of the centralized communications systems of the Services and the Defense Communications Agency providing the backbone common-user system for all elements of DOD. This program is also centrally managed in order to avoid duplication of effort and to improve the responsiveness of the communication system to our national command authorities. As a result of our improved management, we have reduced the manpower needed to support our communications systems without reducing our capabilities. A reduction from 54,000 military actually used in FY 71 to a planned requirement of 50,000 in FY '73 represents an 8% reduction.

Command and control of our forces is exercised through the Defense Communications System and the supporting Service communications system. The basic communications requirements are established by the deployment of our forces. Then, based on prior experience and the expressed needs of the field commander, the required capacity for each of several modes of communication (e.g., voice, teletype, etc.) is determined. The required capacity and the technical state of the art then determine the number and location of transmitter sites, relay stations, etc. Each such operating location is manned based on the number of operating positions to be filled, maintenance manhours required, and the need for administration and support. The total strength of the communications category is then determined by the number of operating locations, the manning of each, and additional personnel for supervision and support of the system as a whole.

COMMUNICATIONS MILITARY MANPOWER & TOA
(Manpower in Thousands, TOA in $ Billions)

	FY 71	FY 72	FY 73	FY 73	
	Manpower			TOA	% MilPers
Army	16	14	13	.4	29%
Navy	10	10	9	.4	23%
Marine Corps	*	*	*	*	-
Air Force	29	28	27	.8	40%
Total Communications Manpower/TOA	54	52	50	1.5	32%

NOTE: *Less than 500 manpower spaces or .1 Billion TOA

Research and Development

This category covers the research and development not associated with the development of major weapons systems that have been included in other categories such as Strategic or General Purpose Forces. In general terms, this category covers mainly the technology base of the DOD R&D program. The foundation of all U.S. weapon system development is this large "technology base". Many new weapon concepts originate in this base, and the progression from idea to weapon always involves the base in various ways. From the base also come advances in such areas as oceanography, meteorology, and medicine which contribute directly to improved operational capability and personnel performance. The technology base is characterized by breadth, complexity, and constant change. It encompasses virtually all aspects of the physical, biomedical, environmental and behavioral sciences, plus the engineering disciplines. The military personnel assigned to R&D perform technical and management duties at our 122 DOD Laboratories and Test Facilities. They also participate in special evaluations of equipment by serving in experimental troop units or comparable military organizations.

We have attempted to retain military manpower in R&D activities at a reasonably stable level over the years to assure the accomplishment of these essential stated objectives. Even so, a small reduction of 5% is being made in the area.

Military personnel assigned to this category are a vital part of the entire DOD R&D program. This is true for two reasons: First, many of our military personnel hold advanced degrees in science and engineering and are well respected in the scientific community for their contribution to Science. The second and probably the most important requirement for these personnel is that being experienced military professionals they are very familiar with military requirements for new weapons and equipment, and they bring this experience with them to help orient the direction and thrust of the DOD R&D program and insure that the program is directed towards areas that will satisfy the requirements of the Armed Forces.

RESEARCH AND DEVELOPMENT MILITARY MANPOWER AND TOA
(Manpower in Thousands, TOA in $ Billions)

	FY 71	FY 72	FY 73	FY 73	
	Manpower			TOA	% MilPers
Army	9	9	9	1.5	6%
Navy	8	8	8	1.5	5%
Marine Corps	*	*	*	*	-
Air Force	20	19	19	1.8	12%
Total Research & Development Manpower	37	36	35	4.8	8%

NOTE: * Less than 500 manpower spaces or .1 Billion TOA.

Support to Other Nations

This category consists of Military Assistance groups and international military headquarters. In conjunction with the Department of State and the U.S. Ambassador to the host nation, each assistance activity is individually tailored to meet the needs of the country to which it is assigned. In view of the emphasis the Nixon Doctrine placed on helping our allies help themselves, this program has increased. Most of the increase represents an accounting transfer of manpower from U.S. combat forces to Support To Other Nations.

SUPPORT TO OTHER NATIONS MILITARY MANPOWER AND TOA

(Manpower in Thousands, TOA in $ Billions)

	FY 71	FY 72	FY 73	FY 73	
	Manpower			TOA	% MilPers
Army	15	10	10	1.4	18%
Navy	4	5	5	.1	45%
Marine Corps	*	*	*	*	-
Air Force	2	2	12	.7	9%
Total Support to Other Nations Manpower	22	18	27	2.2	17%

NOTE: * Less than 500 manpower spaces or .1 Billion TOA.

Other Mission Manpower Summary by Services

The table below displays military manpower by Service. The differences in Other Mission manpower among Services is due to differences in missions. Even though these workloads are somewhat independent of the overall level of U.S. forces, the reductions from 204,000 to 180,000 military represent a 12% reduction in three years, which is consistent with a 13% reduction in total DOD military end strengths for the same period. Since FY 68, Other Mission manpower has been reduced 21% (228,000 to 180,000).

OTHER MISSION MILITARY MANPOWER (000)

	FY 71 (Actual)	FY 72 (Programmed)	FY 73
Army	72	58	52
Navy	41	38	36
Marine Corps	2	2	2
Air Force	89	82	89
Total Other Mission Manpower	204	181	180
Other Mission Manpower/Total Service Manpower			
Army	6%	7%	6%
Navy	7%	6%	6%
Marine Corps	1%	1%	1%
Air Force	12%	11%	12%

V

GENERAL SUPPORT AND MANPOWER REQUIREMENTS

Purpose and Types of Support

Combat forces cannot survive in conflict without adequate support. During peacetime, the readiness of our mission forces and their standard of living are the direct products of the support system. As we look forward to the all-volunteer environment, cognizant of the increasing cost of manpower, it is essential that we fully understand the role of support in the Department of Defense and that we take continuing action to provide the necessary support at the lowest cost.

There are three tiers of support in the Defense structure:

Organic Support functions are performed by individuals assigned to combat, or mission, units. These would include, for example, men performing maintenance, security, and administration in an infantry battalion or tactical fighter wing. Such men are trained and expected to bear arms against an enemy and are integral to units whose primary mission is combat. Because it is difficult to draw a clear line between these support people and their more combat-oriented counterparts in the same units both are included in mission forces. Nevertheless, each military service periodically reviews the composition of its combat units in order to increase the effectiveness per man in each such unit, aiming to provide adequate organic support with the minimum of support manpower.

Direct Mission Force Support consists of activities which, while not fully allocable to a specific kind of unit (division, wing, or ship), directly support a group of complementary mission functions that produce a common major output and are called a program (e.g., Strategic Programs). These activities usually fall into categories called base operations, logistics, training, and command. For example, a Strategic Air Command base provides maintenance, supply, security, and general housekeeping services for a group of strategic program functions assigned to that base (e.g., B-52's, tankers, SR-71 reconnaissance aircraft, and airborne command posts).

Central Support is that which cannot be associated easily with a single Defense program or mission, and therefore takes on a character of being joint or common support. Included are centralized supply, maintenance, training, and headquarters which provide service-wide support to several major programs (e.g., Navy undergraduate pilot training trains men for fighter-attack, ASW patrol, transport and helicopter missions). General Support includes both direct program support and central support. Such an aggregation permits a more comprehensive view of support than we have had in the past and opens

the door to more thorough analysis to enable us to provide necessary support in a more economical manner.

In the remaining sections of this chapter, we discuss the "combat-to-support ratio" and we describe and discuss in detail the components of the major fiscal guidance category of general support.

The Combat-to-Support Ratio

A. Introduction

In earlier chapters of this report we discussed the mission forces of the Department of Defense and the manpower required to operate those forces, and in the previous section we defined a concept of support. A comparison of combat elements and support is inevitable. There are several alternative ways of reflecting the distribution of manpower between combat and support functions.

B. Defining the Ratio

There is a wide range of valid answers to the question, "What is the combat-to-support ratio?" There is no "best" definition. The definition of what can be included in combat varies by Service because of differing organizations and missions; for example, the Navy and Air Force tend to be weapons systems oriented, requiring fewer men directly engaging the enemy than do the Army and Marine Corps. Therefore, there are many ways to define combat and support and no simple ratio can be used as an adequate measure of whether there is a proper balance between mission forces and support.

This report presents seven different views of combat and support for each Service, beginning with a very detailed level (i.e., individual skills) and ranging up through the broad level of major Defense Programs. A detailed discussion of each method is shown below.

Combat Skills. This category includes all individuals whose primary duty is to fire at the enemy. For the Army and Marine Corps, it includes infantry, armor/cavalry, and artillery skills. For the Navy, it includes unrestricted line officers, torpedomen, fire control technicians, aviation antisubmarine warfare operators, gunners mates, and minemen. For all Services, it includes the crews of mission aircraft.

Intermediate Combat Units. This category includes units at the battalion, squadron, ship level whose primary mission is to fire at the enemy. For the Army and Marine Corps, it includes infantry, armor/cavalry, and artillery units of battalion or smaller size. For the Navy, it includes combat ships. For all Services, it includes combat aviation units of squadron or smaller size.

Modified Major Mission and Support Categories. This grouping is the same as described below, except that units which provide direct support are removed from the standard categories and placed in a separate Direct Support category. For example, Navy support ships are moved from Force Mission to Direct Support. The number shown is the percentage of total manpower which remains in Force Mission units.

Major Mission and Support Categories. This system was introduced in Chapter 1 and consists of three major categories: Force Mission, Other Mission, and General Support. The number shown is the percentage of total manpower in Force Mission units. The logic here is that the Services are given primary missions (as discussed in Chapter III), and they require a certain amount of support to accomplish those missions; the support is discussed in Chapter IV (Other Mission) and later in this chapter (General Support).

Major Combat Units. This category covers large organizational elements that engage in combat as an entity even though parts of the organizations may not directly face hostile fire as their primary mission. For the Army and Marine Corps, it includes divisions and their deployed supporting units, separate brigades, regiments, and separate combat units such as artillery, air defense, aviation, target acquisition, and special forces. For the Air Force and Marine Corps Air Units, it includes the total wing structure, including aircraft and missile squadrons, maintenance, munitions, weapons system security and command functions. For the Navy, it includes the fleet structure, encompassing fleet commands, type commands, and all subordinate units.

FYD Programs I, II, IV. This category includes the Five Year Defense Programs I (Strategic Forces), II (General Purpose Forces), and IV (Airlift, Sealift Forces). In addition to combat and combat support units, these programs include all base support, crew and unit training, logistics support, and command and control support necessary to accomplish the mission of the programs.

Operating Forces. This category consists of all combat units, combat support units, and all deployed support. This represents a close approximation of the Operating Forces categories that were previously used in budget presentations to the Congress prior to FY 1962, the main categories of which are Operating Forces, Supporting Forces (including special activities), Training Forces, and Individuals (transients, patients, and prisoners).

Using the preceding seven definitions, the table below indicates for each Service the per cent of total military manpower which could be considered as "combat." In general, there has been a slight decline in these percentages since 1964, for reasons which are explained later in this section.

PERCENT OF MILITARY MANPOWER IN COMBAT/FORCE MISSION UNITS, FY 64-73 a/

	FY 64	FY 68	FY 71	FY 72	FY 73
Army					
Combat Skills	*	*	23	23	24
Intermediate Combat Units (Battalions)	*	*	23	24	26
Major Mission & Support Categories (Modified)	37	31	27	33	34
Major Mission & Support Categories	57	50	51	51	53
Major Combat Units (Divisions)	*	*	49	52	54
FYD Programs I, II, IV	63	52	53	53	54
Operating Forces	64	55	57	56	57
Navy					
Combat Skills	*	*	11	11	11
Intermediate Combat Units (Ships/Sqdns)	38	35	33	35	34
Major Mission & Support Categories (Modified)	38	35	33	35	34
Major Mission & Support Categories	50	50	46	48	47
Major Combat Units (Fleets)	53	53	49	50	49
FYD Programs I, II, IV	63	63	58	59	57
Operating Forces	62	63	60	61	60
Marine Corps					
Combat Skills	*	*	28	28	28
Intermediate Combat Units (Battalions)	*	*	28	32	32
Major Mission & Support Categories (Modified)	42	42	38	45	45
Major Mission & Support Categories	58	52	48	54	54
Major Combat Units (Divisions/Wings)	*	*	48	53	54
FYD Programs I, II, IV	68	61	59	63	64
Operating Forces	69	60	60	65	65
Air Force					
Combat Skills	*	*	5	5	5
Intermediate Combat Units (Squadrons)	9	11	12	12	12
Major Mission & Support Categories (Modified)	31	32	29	29	28
Major Mission & Support Categories	34	44	33	33	32
Major Combat Units (Wings)	61	61	57	58	56
FYD Programs I, II, IV	63	64	59	58	58
Operating Forces	74	77	72	71	70

a/ Numbers shown are "combat" personnel as a per cent of total manpower in each Service. The total includes "individuals" (trainees, transients, etc.). If combat personnel are taken as a per cent of the manpower in units, the percentage will be higher.

NOTE: * Data presently not available.

The categories shown in the table can and do serve to measure general trends in combat-to-support ratios. But this is all they can do. Forces cannot be designed to meet an abstract concept like combat-to-support

ratio, but instead must be designed to provide an efficient mix of combat and support units to accomplish the specific tasks given to the Services.

C. The Development of a Support System

In determining support requirements for its combat forces, each military Service considers such factors as its operations plans and policies, to estimate the logistical impacts of mission; enemy situation; type of combat forces to be supported; terrain and climate; availability in the operational area of medical, transportation, and communications facilities; and special requirements for other Services and allied forces. Additional information is obtained from administrative plans and policies about medical evacuation, materiel stockage level, in-theater maintenance, construction, and other logistical problems. A simple change in policy can have a very significant impact on the support requirements. For example, an accelerated medical evacuation policy decreases requirements for engineer construction units in the theater (as fewer hospitals need to be built) but increases the need for transportation units and replacement personnel.

Certain underlying principles are also used in the force structuring process, including:

. Maximizing combat power through advanced technology rather than gross application of American combat soldiers.

. Making forces essentially self-sustaining.

. Being versatile enough to support our various global commitments.

These principles, which help determine the shape and texture of our force structure, differ from those of other nations. For example, compared to combat forces of other armies, U.S. combat units generally have much greater staying power than most foreign units.

Technology and Combat Power

One of our principles is to decrease the number of our men exposed to enemy fire by taking advantage of technology to attain equal or increased combat effectiveness. We have thus been able to reduce our total force, and particularly the percentage of our force dedicated to direct combat.

Improved weapons systems such as tanks, attack helicopters, and artillery munitions, have permitted increased combat productivity in terms of effectiveness per man directly exposed to enemy fire. A gross measure of increases in combat productivity is obtained by applying Weapon Firepower Potential Scores (WFP) to the weapons found in 1951

and 1969 Army forces. Based on WFP, the table below shows that the 1969 standard M60A1 tank is nearly three times as effective as the 1951 standard M4A3. (Actual effectiveness may be considerably better since WFP is an index based on the lethal area covered by the weapon. It ignores advances such as armor protection, range, and mobility and compares weapons only on the basis of the lethality of each round and the number of rounds the weapon is expected to deliver.

WEAPON FIREPOWER POTENTIAL (WFP), 1951 - 1969

Weapon	Year	Type	% Change in WFP	1969 Times as Effective as 1951
Tanks	1951	M4A3		
	1969	M60A1	+165%	2.7
Anti-Tank Weapons	1951	75mm RR		
	1969	TOW	+350%	4.5
Machine Guns	1951	.30 Cal		
	1969	7.62 mm	+ 82%	1.8

WFP scores are potential. The M60A1 tank is a potentially more powerful weapon than the M4A3: it has a larger, more accurate main gun; it provides a far more stable firing platform; its range-finding system enables the gunner to fire with much greater accuracy. Similarly, today's TOW wire-guided anti-tank missile has been demonstrated to be far more accurate than the 75mm recoilless rifle of the Korean War era, and it allows the infantryman a greater stand-off distance from the target. However, these modern weapons require more support to ensure their effective operation on the battlefield. In order to achieve their potential firepower, these weapons need more maintenance, supply, and transportation than did the weapons of the Korean War. More training is required both for the operators and those who must maintain these weapons. Finally, we must continue our research and development programs (which are also considered support) in order to equip our soldiers with the most effective weapons which our technology can provide.

Using the same years and WFP for comparison, the next table, Unit Firepower Potential (UFP), 1951 - 1969, shows that a tank battalion in 1969 is nearly twice as effective as it was in 1951 even with 28 per cent fewer tanks. The table also shows that an infantry battalion with only two per cent more men is nearly three times as effective as it was in 1951.

UNIT FIREPOWER POTENTIAL (UFP), 1951 - 1969

Unit	Year	Combat Strength	% Change	% Change in UFP	1969 Times As Effective as 1951
Inf Bn	1951	538			
	1969	547	+ 2%	+186%	2.9
Tank Bn	1951	406(71 Tanks)			
	1969	294(54 Tanks)	-28%	+ 83%	1.8
Div Arty	1951	1623(72 Tubes)			
	1969	1653(76 Tubes)	+ 2%	+600%	7.0

Modern technology has dramatically increased the combat capability of our forces and permitted reductions in the number of soldiers directly exposed to enemy fire. At the same time these more complex weapons have increased the requirements for supply, transportation and maintenance personnel. In addition, systems such as tactical nuclear weapons and helicopter gunships, while very destructive on a per weapon basis, have been added to the force and carry with them large support requirements. The net effect has been a decrease in the percentage of men in direct combat positions since the Korean War.

In non-combat units, technology has also contributed improvements. For example, improved techniques in medical evacuation using helicopters have made it possible to provide earlier and more sophisticated medical treatment to the wounded contributing, at least in part, to the declining casualty rates experienced in recent conflicts. For example, the table below shows that, while the Vietnam casualty rate was only about 13 per cent lower than in the Korean War, the rate for battle deaths was nearly 44 per cent lower.

CASUALTY DATA
(Annual Rates per 1000 Soldiers)

	WWI	WWII	Korean War	Vietnam War	Per Cent Change Korea to VN
Battle Casualties a/	83.5	30.6	22.7	19.8	-12.8%
Battle Deaths b/	16.1	9.2	6.4	3.6	-43.8%

a/ Total killed and wounded in action.
b/ Total combat deaths.

D. Support Requirements of Forward Deployments

In the event of NATO mobilization, the preponderance of forces deployed from CONUS to Europe initially are tactical maneuver units and supporting firepower and combat engineer battalions. Thus, the in-country support forces with minor augmentation must sustain the administrative, logistical, and medical base for a rapidly expanded tactical force in intense warfare before major increments of follow on support units are deployed. Most of the forces of other nations are deployed within or in very close proximity to their own borders. In other words, the price of distance is additional support.

There are, moveover, U.S. forces in Europe which are there for purposes other than supporting the combat divisions. These include long range missile units (Pershing and Sergeant), the Berlin Brigade, theater air defense units, and Army strategic intelligence and communications units which are part of the total defense system.

General Support Size and Cost

The Defense program for FY 73 provides for 7.5% fewer military personnel in General Support jobs than in FY 64, as shown in the table below:

MILITARY AND CIVILIAN MANPOWER IN GENERAL SUPPORT, FY 64 AND FY 73 (000)

	FY 64	FY 73	Per Cent Change
Military	1208	1116	- 7.5%
Civilian	941	915	- 2.8%
TOTAL	2149	2031	- 5.5%

While the total number of military and civilian people in General Support has declined, the relative percentage of General Support manpower to total Service manpower has increased slightly from 56 per cent in FY 64 to 58 per cent in FY 73. While the percentage of military manpower in General Support has also increased since FY 64 (45 to 47%), it has remained stable since FY 68. The increase in General Support manpower since FY 64 is attributed to several factors:

Real changes in the level of support being provided, as in medical care for active duty perscnnel and their dependents, as well as retirees and their dependents.

. More rapid reductions in force units than are possible in the General Support base. For example, from FY 64 to FY 73 the active Navy fleet declines from about 932 ships to 594, with large reductions in mission forces and total Navy manpower. The number of major active CONUS ports, however, remains constant at eight (four on each coast) and 10 shipyards have stayed open. While some of the manpower at each port and shipyard could be released, there are certain fixed requirements which must be met regardless of the number of ships in the active fleet.

In addition, we can more easily activate forces than open bases. A recent Air Force study has shown opening a closed undergraduate pilot training facility costs two-to-three times the annual cost of operating the facility, and rehiring skilled civilians may be extremely difficult. Moreover, the air space reverts to civilian control (FAA) when a base is closed, further hampering attempts to reopen the base to meet new military requirements.

. Better identification of support manpower. To illustrate, all Services except the Air Force have maintained in the General Support category an account for "transients," personnel who are moving between two permanent units. The Air Force established a transient account in FY 71; about 10,300 billets are shown in this account in FY 73.

In addition, there are external factors which affect the size and cost of General Support. These are principally constraints which emanate from both national and international economic and political considerations. For example, closing a base, without adequate lead time and preparation of offsetting programs, can have a harsh economic impact in the vicinity of the base. Additionally, there are legislative requirements to retain the level of certain activities (e.g., the size of the Reserves and the number of Naval Districts). These activities require support and must be considered in the overall support plan.

The next table summarizes military manpower in each component of General Support and shows FY 73 civilian strengths for comparison.

GENERAL SUPPORT MANPOWER, TOTAL DOD
(Military and Civilians in Thousands)

Category	Military			Civilian
	FY 71	FY 72	FY 73	FY 73
Base and Individual Support:				
Base Operating Support	313	300	294	331
Medical Support	100	95	94	43
Other Individual Support	167	118	119	11
Sub-Total	580	514	507	385
Training	551	460	458	40
Command	138	129	121	95
Logistics	30	30	31	395
TOTAL GENERAL SUPPORT	1300	1133	1116	915

The components of General Support will be discussed next in detail; they are Base and Individual Support, Training, Command, and Logistics.

Base and Individual Support

This category includes the functions and resources needed to support the base structure and to provide various services to the individuals in the force. It is divided into three major subcategories: Base Operating Support, Other Individual Support, and Medical Support.

A. Base Operating Support

The Department of Defense maintains a base structure to provide facilities for:

- Operating forces in wartime (i.e., air bases, ports, etc.)
- Keeping forces in peacetime (i.e., training areas, ranges, hangers, troop housing, etc.)
- Supporting forces (arsenals, depots, shipyards, training centers, schools, research laboratories, etc.)
- Providing services to personnel and dependents (family housing, commissaries, theaters, etc.).

The number and location of bases depends on the size of the force and support structure, the need for strategic presence (proximity of forces to theater of operation), the need for dispersion, and geographic, topographic, economic, and political considerations.

The Department of Defense operates 795 principal installations and activities (493 in the United States, 302 overseas). Of these, 392 (320 in the U.S, and 72 overseas) are major bases. A major base contains 1000 or more permanent party personnel, is self-supporting (i.e., does not depend on another base for its services) and contains a wing, division, or similar force unit or operates a major school (e.g., pilot training). In addition the Army maintains 232 camps (called kasernes in Germany) overseas (excluding Southeast Asia). Camps collectively provide the same services as bases, but individually are much smaller (containing no more than a battalion). Of the total major bases, 107 are manned predominately by civilians. These include supply and maintenance depots, arsenals, shipyards, and other logistical, research and development, and administrative activities.

Base Operating Support (BOS) provides a wide range of services in support of the entire Defense effort. These services are similar to those provided by local government, utilities, and the "service industry" segment of the civilian economy. In Defense, these services can be grouped as follows: (a) services which directly support forces and troops (e.g., airfield operation, wharf operation, food services, payroll activities, and base

supply activities; (b) services needed to maintain the base facilities (e.g., building and road construction and repair, police and fire protection, trash and sewage disposal, utilities); (c) services needed to maintain the standard of living of troops and dependents (e.g., commissaries, exchanges, religious activities, sports and entertainment facilities).

The requirement for manpower to perform all of these base support services is workload dependent. The relationship of workload to manpower is based on engineered standards which are periodically revised by the Services. The manpower required is determined from manning documents covering the various types of services performed.

The level of manpower required in BOS can be viewed as depending on the number of bases and the size of the force supported. The services provided at the bases, and the forces on them, generate workload. The decision to open or retain a base generates a workload that requires a relatively "fixed" number of people (activities such as road repair or electrical power plants are relatively insensitive to the number of people on the base, bur rather depend on the existence of the base). The "fixed" requirements change over time because of policy decisions to provide additional services (i.e., longer commissary hours). For FY 73, the "fixed" portion of BOS manpower ranges from 300 to 800 (military and civilian) per base. This amounts to about 37% of the total BOS manpower in FY 73.

The remaining 63% of BOS manpower depends on the population that is being supported. Thus, it can be viewed as a rate of support (i.e., how many BOS people are needed to support one operating person).

Organizational and operational differences between the Services make inter-Service comparisons of BOS invalid. In the Navy much support is provided by the crews of combat vessels. In the Army support is either organic to the combat unit (i.e., an infantry battalion has food service and supply personnel) or in direct support of a combat unit. However, Air Force flying squadrons have almost no support personnel. They receive the same kind of support from BOS as is provided organically in Army and Navy units. Therefore, BOS manpower directly supports the forces and is designed to be deployed with the forces.

The following table summarizes the base operating support military manpower for FY 71-73, shows total FY 73 funding and indicates the percentage of BOS funds devoted to military personnel:

MILITARY MANPOWER AND TOA, BASE OPERATING SUPPORT
(Manpower in Thousands; TOA in $ Billions)

	Military Manpower			TOA in FY 73	
	FY 71	FY 72	FY 73	Total	% Mil Pers
Army	47(18)	46(18)	45(15)	2.4	16%
Navy	57(15)	55(13)	56(14)	1.3	35%
Marine Corps	24(2)	20(2)	20(2)	.4	37%
Air Force	187(23)	180(23)	173(23)	3.2	43%
DOD TOTAL	313(58)	300(56)	294(54)	7.4	32%

As stated above, BOS provides a wide range of services in support of force maintenance and operation. Because of organizational differences between the Services, it is difficult to determine where resources should appear. Therefore, similar support functions occasionally appear in different Fiscal Guidance categories. As an illustrative example, Field and Theater Army Support units (includes: administrative, civil affairs, legal, finance, maintenance, medical, supply, transportation and military police), Construction, Engineer Battalions, and Combat Area Signal Battalions, provide services similar to Army garrisons (which are in BOS). Similarly, Underway Replenishment Ships, Repair Ships, Tenders, and Mobile Construction Battalions, provide services similar to Naval Stations (which are in BOS). Unlike the Army and Navy, in the Air Force, most base supply and service units (direct mission support) appear in BOS. The figures in parentheses above show the illustrative effect on BOS military manpower levels of fully excluding BOS that is in direct support of mission force programs.

B. Medical Support

Medical Support provides the resources for the operation of Department of Defense "fixed site" medical activities, compensation for dependent and retiree care in non-military medical facilities, and manpower spaces to offset reduced unit manning resulting from lost time for Servicemen requiring extensive hospitalization.

The Department of Defense operates 210 hospitals and approximately 491 dispensaries with a current total of 39,397 operating beds. The Department of Defense operates these medical facilities to provide necessary care for wounded and ill servicemen. Pursuant to Chapter 55, Title 10, U.S. Code, medical care is also provided to persons who are not in the active military. In addition to active military manpower, 7.3 million retirees, dependents, and other beneficiaries are eligible to receive medical care from the Department of Defense. Fifty-two per cent of out-patient care (total out-patient visits in FY 71 were 51.8 million) and 32% of in-patient care provided in military facilities was devoted to dependents and retirees in FY 71.

Many dependents and retirees live in areas where they cannot receive

medical care at military facilities due to distance or because of limited capacity at the medical facility. These people (about 800,000) are reimbursed for a major portion of their medical expenditures through the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). CHAMPUS comprises approximately 17% of Medical TOA. Expansion of CHAMPUS funding over recent years (561% increase FY 64 to FY 73) has enabled the Defense Department to meet the medical needs of the dependent population and the increasing retiree population (140% increase FY 64 to FY 73 estimate) while increasing military manpower (excluding "patients") in Medical Support only 14%.

The number of people needed to staff medical activities is based on detailed workload studies for each facility. For example, the number of nurses in a hospital depends on patient load, which is based on an estimate of the expected number of patients and the expected duration of illness. CHAMPUS funding is based on the expected average number of claims per person as well as the population utilizing CHAMPUS, and expected inflation of civilian medical costs. A discussion of possible means to obtain more health services from civilian sources will be addressed in a separate report as required by PL 92-129.

Manpower is provided to offset the time lost as a result of servicemen being hospitalized for periods in excess of 90 days during the year. This "patient" allowance is necessary to prevent degradation of unit effectiveness due to the loss of personnel because of wounds or illness. The level of "patients" is based on the level of military manpower and the probability of men being wounded or contracting a hospitalizing illness. The level of "patients" has dropped from 35,200 in FY 68 to 7,600 in FY 73.

The following table shows the manpower levels in Medical Support for FY 71 to FY 73. The decreasing manning level for the Army is primarily the result of decreasing "patient" requirements.

MILITARY MANPOWER AND TOA, MEDICAL SUPPORT
(Manpower in Thousands; TOA in $ Billions)

	Military Manpower			TOA in FY 73	
	FY 71	FY 72	FY 73	Total	% Mil Pers
Army	49	42	39	1.0	41%
Navy	19	18	21	.5	39%
Marine Corps	1	1	1	*	100%
Air Force	31	33	33	.7	52%
DOD TOTAL	100	95	94	2.2	44%

NOTE: * Less than .1 billion.

C. Other Individual Support

This category includes manpower to provide miscellaneous personnel related services and to offset the productivity lost by men in transient or prisoner status. The major components are:

Recruiting and Examining manpower operates recruiting offices, central recruiting activities (e.g., preparation and distribution of mass media advertising) and the Armed Forces Entrance and Examination Stations. The manpower required for these activities depends on the need for new accessions, the draft level, and the average productivity of a recruiter. Efforts to achieve an All Volunteer Force have required increased recruiting efforts. Thus, recruiting manpower has increased as shown below:

RECRUITING AND EXAMINING MANPOWER (000)

FY 64		FY 68		FY 73	
Military	Civilian	Military	Civilian	Military	Civilian
12.5	1.0	13.4	2.9	21.1	5.4

Transients comprise the largest share (69% in FY 73) of Other Individual Support. Additional manpower is needed to offset the productive time lost by "transients" -- personnel engaged in Permanent Change of Station (PCS) moves. This additional manpower is necessary to prevent the degradation of unit effectiveness and readiness resulting from undermanning units. The number of spaces needed is based on the expected number of PCS moves (i.e., the number of operational, rotational, and training PCS moves), and the average duration of the move. It is therefore related to accession, release and rotation policies. During the war in Southeast Asia, a one-year tour has been maintained for military personnel assigned to that region. This tour policy created a substantial turbulence. As forces are withdrawn from Southeast Asia, this turbulence is diminishing, thus reducing the need for transient spaces as shown below:

BUDGETED TRANSIENT MILITARY MANPOWER SPACES (000)

	FY 68	FY 71	FY 72	FY 73
Transients	217.5	140.0	89.6	87.8
% of Total Active Military Manpower	6.1%	5.2%	3.7%	3.7%

Prisoners - Manpower spaces are authorized for "prisoners" to offset expected lost time in units resulting from Servicemen being in extended disciplinary confinement. This additional manpower is necessary to prevent degradation of unit effectiveness due to undermanning. The requirement for "prisoners" is based on the level of military manpower and has remained relatively constant at 0.1% of active manpower.

Other minor activities included in Other Individual Support are Overseas Dependent Education and Military Family Housing. These involve approximately 500 military personnel.

The table below summarizes military manpower for Other Individual Support, shows total FY 73 funding and the percentage of funds used for military personnel.

MILITARY MANPOWER AND TOA, OTHER INDIVIDUAL SUPPORT
(Manpower in Thousands; TOA in $ Billions)

	Military Manpower			TOA in FY 73		
	FY 71	FY 72	FY 73	Total	% Mil Pers	a/
Army	86	56	55	1.1	41%	
Navy	49	33	34	.6	42%	
Marine Corps	21	15	15	.2	56%	
Air Force	11	14	14	.7	18%	
DOD TOTAL	167	118	119	2.6	37%	

a/ Excludes PCS movement costs.

Training

Training is an important element of general support. It consists of the officers, enlisted men and cadets who undergo formal training in the military training establishment, as well as the military personnel who conduct and support training activities.

In order to have a smoothly functioning, efficient and ready military, it is necessary to man it with the right number of men, with the proper skills, at the right time. Producing these trained personnel is the task of the training establishment. The rate at which men must be trained in a given skill is a function of projected skill requirements versus projected skill inventories. If the inventory of men in a skill is not forecast to be as large as the need, new men must be trained. The manpower requirement for trained strength is determined by the force to be manned. The inventory of trained men in a given year is determined by the inventory in the previous year minus the losses to that inventory. The losses in a given year depend heavily on the re-enlistment rate. Because training rates are dependent on losses, reductions in training due to the increased retention rates of a volunteer force will not occur immediately, but rather in future years when the draft induced volunteers have left the force and been replaced by true volunteers.

There are many different types of training. With few exceptions, however, each type of training falls into one of the following categories: recruit, specialized, flight, crew and unit, professional and officer

acquisition. The largest training programs in terms of manpower are recruit, specialized and flight training. The following table summarizes the manpower in these training elements.

SUMMARY TABLE OF TRAINING ELEMENTS
(Military Manpower in Thousands)

	FY 71	FY 72	FY 73
Recruit	198.3	148.7	150.9
Specialized	180.9	152.3	153.6
Flight	56.7	47.4	43.8
Other	114.6	111.5	109.5
TOTAL	550.5	459.9	457.8

Recruit or initial entry training provides new accessions with the basic skills and knowledge necessary to enter the military environment.

The size of the recruit training establishment in a given year is related to the number of active and Reserve Component new accessions in that year. The average length of time a recruit spends in basic training varies according to Service. The Army currently provides 8 weeks and 3 days of basic training at Army Training Centers (ATC) located at 8 bases in the United States.1/ In response to diminishing recruit training loads two bases, Fort Lewis and Fort Campbell, are phasing out their ATC's. About 64% of the Army recruits who graduate from basic training receive immediate advanced individual training (AIT) or combat support training (CST). AIT trainees receive instruction in the combat arms skills whereas CST trainees become clerks, drivers, mechanics, cooks, wiremen or radio operators. AIT/CST trainees are also trained at ATC's and are included in the recruit training account. Navy recruit training is given over a 9 week span at 4 separate bases. One of these recruit training centers is programed to be phased out by end FY 73. All Air Force recruits undergo 6 weeks of training at Lackland Air Force Base, Texas. Marine Corps basic training and infantry combat training (ICT) are currently held at 4 bases for a duration of 12 weeks. However, the Marine Corps plans to reduce recruit/ICT training from 12 to 11 weeks achieving a one man-week savings for all recruit accessions.

The number of personnel required to support a given trainee load in each phase of recruit training is established through military staffing guides which result from work measurement studies and historical experience. In general terms, however, the number of instructors and overhead staff in

1/ Includes WAC basic training (8 weeks) and modified basic training for conscientious objectors (6 weeks).

recruit training is related to the trainee load which is the number of recruit trainees in training per week. This load includes active and reserve personnel. The following table summarizes for each Service the relationship between the average trainee load the number of instructors and staff in recruit training.

RECRUIT TRAINING
(Military Manpower in Thousands)

	FY 71	FY 72	FY 73
Army			
Average Trainee Load	123.8	91.3	105.9
Instructors and Staff	28.7	26.1 a/	26.0
Navy			
Average Trainee Load	18.7	20.7	29.4
Instructors and Staff	1.7	1.8	2.1
Marine Corps			
Average Trainee Load	15.7	15.5	15.5
Instructors and Staff	3.7	4.2	3.9
Air Force			
Average Trainee Load	17.1 b/	12.8	14.8
Instructors and Staff	1.5	1.5	1.7

a/ Recruit training structure temporarily underutilized due to fewer new accessions than planned at the beginning of FY 72.
b/ Reflects a 30 June on board strength inflated by abnormally high accessions in the latter half of FY 71.

Specialized training provides individuals with new or higher degrees of skills to match specific job requirements. Each year a certain percentage of those who graduate from recruit training receive immediate additional specialized training. Therefore, the number of men in the specialized training establishment in a given year is, in general, a function both of the number of new accessions in that year and the number of men already in the Service who require additional training. In addition, foreign military, the Reserve Components and some civilians are trained in specialized training.

In the Army, specialized training takes place at one of 28 schools. At these schools a recruit learns skills necessary to become a radar and microwave repairman, an armament repairman or one of many different categories of technicians. About 24% of the Army recruits who graduate from basic training go directly to specialized training. The percentage of recruits who receive AIT or CST training as opposed to less combat oriented specialized training is diminishing slightly (70% in FY 71, 69% in FY 72 and 67% in FY 73). This reflects a decreasing relative need for combat skills. The average course length for school trained students in the Army is 16.5 weeks.

In the Navy, specialized training for recruits is predicated on the long range requirements for growth and advancement to the E4 grade. In FY 73 about 58% of the recruit training graduates will be given specialized training at approximately 65 schools. This compares with 71% in FY 71 and 67% in FY 72 and results from the fact that the need for men with specialized training has remained relatively constant while the number of recruits has risen. The average course length of schools in specialized training is only 18 weeks, though the range of course lengths is wide depending on the school. The Marine Corps provides specialized training for 57% of the recruit training graduates for an average duration of 2.7 months.

The Air Force provides specialized training at 5 Air Force bases. The percentage of basic training graduates who enter technical training skills varies according to predetermined trained personnel requirements for each Air Force specialty. In FY 73, 82% of those who graduate from basic training will be given specialized training, compared with 80% in FY 71 and 86% in FY 72. The average course length in Air Force specialized training will be 14.8 weeks in FY 73.

The following table summarizes by Service the average student load (average number of students in specialized training per week) and the number of instructors and staff required to support that load. As in recruit training, the number of instructors and staff is related generally to the average student load; however, the actual programing of instructors and staff is done at a much more detailed level.

SPECIALIZED TRAINING
(Military Manpower in Thousands)

	FY 71	FY 72	FY 73
Army			
Average Student Load	47.5	40.3	37.1
Instructors and Staff	31.6 a/	20.0 a/	20.0 a/
Navy			
Average Student Load	53.1	53.5	56.7
Instructors and Staff	19.9	18.8	20.7
Marine Corps			
Average Student Load	19.5	14.1	13.0
Instructors and Staff	5.1	4.2	3.6
Air Force			
Average Student Load	26.2 a/	28.2	29.2
Instructors and Staff	14.1 a/	13.5	13.8

a/ End year strengths.

Flight Training needs are based on the demand for military pilots and navigators. Since the average length of flight training per man is about 50 weeks for pilots, and 38 weeks for navigators, the number of men to be trained in a given year is a function of future requirements and retention rates.

We need enough pilots and navigators to provide (a) crews for the aircraft in the force, (b) instructors and students for the training base, (c) necessary supervision of flying and flying related activities, and (d) a supplement consistent with war assumptions, considering reasonable combat tour lengths and rotation policies. During the late 1960's, requirements increased drastically to meet SEA demands. At the same time, unpopularity of the war and attractive opportunities with the civil airlines produced a drop in retention rates. As a result, flight training rates were increased significantly above pre-SEA levels. Recent events have reversed this trend; force levels and SEA activity rates are being reduced, thereby reducing requirements, while retention rates have improved as a result of military pay raises and the softness of the civilian economy.

The following table summarizes by Service the pilot and navigator training outputs for FYs 71, 72 and 73. Pilot training has decreased by 45% (80% in the Army) while navigator training has remained relatively level. (The Air Force did not surge its navigator training rate until FY 72 due to a lesser demand for navigators than pilots.)

DOD FLIGHT TRAINING PROGRAM
(Training Output)

	FY 71	FY 72	FY 73
Army			
Pilots	4,609	1,900	856
Navy			
Pilots	1,475	1,415	1,440
Naval Flight Officers	638	561	610
Marine Corps			
Pilots	632	485	460
Naval Flight Officers	247	150	100
Air Force			
Pilots	3,867	4,150	3,100
Navigators	1,036	1,200	1,300
TOTALS			
Pilots	10,655	8,050	5,856
Navigators/NFOs	1,921	1,911	2,010

The preparation of individuals for flying a particular type of aircraft is included under the classification of crew and unit training. Also included in this category is formal training which is applied simultaneously to an entire military unit by full time instructors as opposed to unit personnel. Examples of this type of training are the Jungle Warfare School in the Army, the Arctic Warfare School in the Army and Crew Survival School in the Air Force.

Professional training activities include Service operated military schools designed to prepare officers for command or comparable staff duties and technical and scientific degree granting programs conducted both by the military and civilian institutions for the purpose of fulfilling requirements for advanced scientific, engineering, medical and managerial skills. Officer acquisition programs include the Service academies, ROTC, Junior ROTC, and other institutions established for the purpose of procuring and training young officers.

An important function of the military school system is performed by school troops. These are a small group of units located at major school centers which are used for practical training, student field exercises and demonstrations. The only significant recent change in the number of school troops is a reduction of five thousand in the Army in FY 72.

A summary of manpower in training is shown in the table below by Service. Included is the FY 73 estimated cost of training and the percentage of this cost accounted for by military personnel pay and allowances (MILPERS).

TRAINING: MANPOWER AND TOA
(Military Manpower in Thousands; TOA in $ Billions)

	Military Manpower			TOA in FY 73	
	FY 71	FY 72	FY 73	Total	% Mil Pers
Army	261	184	175	2.5	55%
Navy	125	124	131 a/	2.0	53%
Marine Corps	51	45	44	.5	73%
Air Force	112	107	108	1.6	64%
TOTAL DOD	550	460	458	6.6	57%

a/ Increases in Navy training in FY 73 are caused by high losses of four year enlistees that entered the Navy in FY 69, coupled with an essentially level end strength from FY 72 to FY 73.

Command

Command provides manpower for (1) operating headquarters and staffs at and above the level of numbered Army, Air Force Air Division, Navy Ship Division, Navy Air Wing, and Fleet Marine Force; (2) supporting headquarters and staffs (i.e., training, logistics, reserve components, etc.); (3) administrative staffs and support activities (i.e., departmental headquarters, finance centers, data processing centers, etc.); and (4) special activities (i.e., operating Presidential aircraft, Civil Air Patrol, supporting Defense and Federal Agencies, etc.). In general, Command functions are related to the size of the force, the composition of the force, and the organization structure. There is continuing substantial effort to make our command structure more efficient through reorganizations and consolidations. As a result, the level of military personnel in Command activities in the Department of Defense decreases by 12% between FY 71 and FY 73. The results of this effort are shown in the table below:

COMMAND MANPOWER
(Military Manpower in Thousands)

	FY 71	FY 72	FY 73
Army	29(25)	25(22)	24(20)
Navy	36(19)	35(19)	33(18)
Marine Corps	10(7)	9(7)	9(7)
Air Force	64(33)	60(32)	56(29)
TOTAL	138(84)	129(80)	121(74)

Command includes a wide range of headquarters and administrative functions, and a varying number of echelons of organizations for each Service. Because of organizational differences between the Services, it is very difficult to determine where resources should appear. Therefore, similar headquarters and administrative support functions occasionally appear in different Fiscal Guidance categories. For example, the Army includes in land forces the headquarters and support commands of the corps and divisions. Similarly, in the Navy, Task Force Groups, and vessel command staffs are included with Naval Forces. These organizations perform functions similar to those of Numbered Air Forces and Air Divisions which are included in the Command category. The figures in parentheses above show the illustrative effect on Command military manpower levels of fully excluding Command that is in direct support of mission force programs.

It should be noted that Command is not synonymous with "headquarters." Forty-six percent of the military manpower in Command is in headquarters. The balance performs other administrative tasks (e.g., operate Presidential aircraft, audit records, operate computers). On the other hand, there are 19,000 military personnel in headquarters which are not included in the

Command category (e.g., personnel in headquarters of combat units). The level of military manning in Command and Headquarters for each Service for FY 73 is:

COMMAND AND HEADQUARTERS MANPOWER
(FY 73 Military Manpower in Thousands)

	Army	Navy	Marine Corps	Air Force
Command (a + b)	24	33	9	56
a. Administrative Support in Command	13	12	7	36
b. Headquarters in Command	11	22	1	21
c. Headquarters Not in Command	11	2		6
Headquarters (b + c)	22	24	1	28

There are four types of command organizations. The first contains individual billets (rather than organizations) which are outside of the control of the Services. The other three contain the headquarters, administrative and support staffs necessary to accomplish the mission of the various Service organizations.

A. Support Outside of Service

Unified Commands - These organizations are used by the Joint Chiefs of Staff to command and control operating units of all Services in unified and coordinated activities. The Services supply manpower to these commands. Included are North American Air Defense Command, European Command, Pacific Command, Atlantic Command, Alaskan Command, Southern Command, Readiness Command, and airborne command posts.

Defense and Federal Agencies - This category consists of manpower which the Services provide to Defense and Federal Agencies. Organizations included are: Office of the Secretary of Defense, Joint Chiefs of Staff, Defense Intelligence Agency, National Security Agency, Defense Communications Agency, Defense Nuclear Agency, Defense Supply Agency, Selective Service System, Coast Guard, Public Health Service, National Security Council, White House Staff, Central Intelligence Agency, Federal Aviation Administration, National Aeronautics and Space Administration, U.S. Embassies.

B. Operating Commands - These organizations provide Service command and control of deployed (or deployable) forces and forces tasked with the defense of the continental United States. Organizations included are: overseas Army commands, Army Air Defense Command, Navy type commands, Navy fleet commands, Sea Frontiers, Fleet Marine Force commands, Strategic Air Command, Alaskan Air Command, Aerospace Defense Command,

Tactical Air Command, Pacific Air Forces, U.S. Air Forces in Europe, and Military Airlift Command.

C. Support Commands - These organizations provide the administration of training, logistics, and Reserve and National Guard components. Organizations included are Army Materiel Command and Commodity Commands, Air Force Logistics Command and Air Materiel Area Headquarters, Naval Materiel Command and Systems Command, Air Training Command.

D. Administrative Commands and Administrative Support Activities - These organizations provide overall policy formulation and administration of the entire Service, and administration of geographic areas of the United States. Included are departmental headquarters and staffs, Naval Districts, Continental Army Command, CONUS Numbered Armies, and HQ Command USAF. Also included are administrative support activities including: personnel assignment activities, central finance and payroll activities, judge advocate activities, inspector general activities.

The level of manpower in these categories for selected years is:

COMMAND MILITARY MANPOWER (000)

	FY 64	FY 68	FY 71	FY 72	FY 73
Operating Commands	61	76	54	49	47
Support Commands	22	19	12	13	13
Administration	46	47	48	43	38
Unified Commands	5	8	8	7	6
Defense & Federal Agencies[a]	17	20	16	17	17
TOTAL	150	170	138	129	121

[a] Includes about 6,000 military personnel in FY 73 assigned to Intelligence Agencies (e.g., DIA and NSA) discussed in Chapter IV.

The Services continually review their command structure at all levels and attempt to make the most effective use of administrative manpower consistent with necessary control and review procedures through organizations and consolidations.

The following table shows Command funding and the share of Command funding devoted to military personnel:

COMMAND TOA, FY 73
($ Billions)

	Army	Navy	Marine Corps	Air Force	TOTAL
TOA	$1.2	$.9	$.2	$1.3	$3.8
% Mil Pers	23%	38%	48%	52%	36%

Logistics

Logistics includes those centrally managed supply, maintenance and support activities needed to: (1) procure equipment and supplies; (2) store supplies used by the combat forces and keep centralized inventory control of major equipment and spare parts; (3) maintain the approved equipment inventory by repairing, modernizing and overhauling major systems and components (aircraft, tanks, engines, etc.); and (4) provide support services such as printing and laundry.

The cost and manpower needs of our central supply and maintenance programs depend on the size and activity of the combat forces, the amount of logistics support provided at unit and base level, depot maintenance repair rates and the cost of performing the individual supply and maintenance functions. The table below shows the manpower needs of the Services and the Defense Supply Agency based on these criteria.

LOGISTICS MANPOWER STRENGTHS (000)

	FY 71 Actual		FY 72 Estimated		FY 73 Estimated	
	Military	Civilian	Military	Civilian	Military	Civilian
Supply	16	140	16	133	17	130
Maintenance	9	250	9	237	9	230
Logistics Support	5	37	5	35	5	35
TOTAL	30	427	30	405	31	395

In FY 73 about 426,000 people will conduct central supply and maintenance operations for DOD. This work force is composed mainly of civilian employees (93%). Military personnel fill supervisory positions, throughout the supply and maintenance system.

Supply Operations - The personnel employed in supply operations are required to buy, store, distribute, manage, and control the supplies and spare parts used by the Services. In FY 73, approximately 147,000 men and women will perform these operations (17,000 military; 130,000 civilians). The Services' supply manpower requirements are based on the size and activity of the equipment inventories and the amount of

maintenance performed on these equipments (aircraft, ships, tanks). Equipment inventory size and maintenance levels determine the number of parts and supplies needed by the operating units and the repair depots. The larger the equipment inventory, the more parts and supplies are needed to support that inventory. Using standard work measures the Services translate parts and maintenance demands into manpower needs to manage and control the supply system.

Since 1969 (peak-Vietnam) the inventory levels and maintenance demands have continuously declined. The number of civilians in the supply system has therefore been reduced. The number of military men in supply operations has increased slightly over the last two years however. This increase reflects an attempt by the Services to improve their supply and inventory control management system which provides supply services at over 350 depots and control centers world-wide.

Maintenance Operations - The personnel employed in maintenance operations repair, overhaul, and modify the Services' major weapon systems and equipments. In FY 73, approximately 239,000 men and women will perform these operations (9,000 military and 230,000 civilians). Maintenance manpower requirements are based on the size and activity of the equipment inventories (force structure) and the maintenance repair/overhaul criteria established for each type of equipment. Each of the Services have criteria which state the frequency of overhaul/repair for each piece of equipment based on engineering standards and past experience. For example, in FY 73 the Air Force will have 455 B-52's in the force. Based on current standards, the overhaul interval for each B-52 is 36 months. Thus in FY 73, about 151 of these aircraft will require overhaul at the Air Force's B-52 depot maintenance facility. Given the demand for B-52 overhauls, the Air Force then estimates the maintenance manpower required to conduct the overhauls based on B-52 workload planning and personnel productivity factors.

The total demand for maintenance manpower is determined by summing the individual maintenance demands for all equipment to be repaired or overhauled by the Services during the year.

Since the peak Vietnam year (1969) the inventory and activity levels of our force have been decreasing. Thus, maintenance demands have also declined; civilian employee levels have dropped about 20,000 since 1971. Civilians accomplish most of the maintenance workload in the Services' depot facilities. Military manpower levels have remained constant over the same time period, reflecting the Services' desire to maintain effective management control of the more than 100 depot facilities world-wide.

Logistics Support Operations - These support personnel perform a wide variety of tasks throughout the logistics establishment; major tasks include writing and publishing the documents and manuals which describe in detail how to repair/overhaul each piece of equipment in the

DOD and overseeing the shipment of cargo from CONUS and overseas ports. Civilian employees perform the basic work; military men manage and supervise the various service organizations. Based on planned FY 73 workloads, logistics support manpower levels will remain at the FY 72 level.

Summary - Logistics manpower needs are based on the size and activity of the force structure and the extent to which we desire to supply and maintain these forces. More importantly, force capability is directly related to the level of maintenance and supply support provided the forces. Performed work and available stocks (spare parts and supplies) determine the readiness of our forces to deploy to combat. Thus the Services continue to plan a high level of maintenance effort through FY 73 to insure that our forces can carry out their primary mission.

MILITARY MANPOWER AND TOA, LOGISTICS
(Manpower in Thousands; TOA in $ Billions)

	Military Manpower			TOA in FY 73	
	FY 71	FY 72	FY 73	Total	% Mil Pers
Army	10	10	9	2.1	4%
Navy	8	8	8	2.1	4%
Marine Corps	2	1	1	.1	10%
Air Force	10	11	13	2.1	5%
TOTAL DOD	30	30	31	6.9	4%

VI

ECONOMIC ASPECTS OF MILITARY MANPOWER

A. Overview of Manpower Costs

Manpower and directly related costs comprise 56% of the DOD budget in FY 73.[1/] The largest single part of manpower costs is expenditures on active military manpower. This chapter presents an overall view of the subject of active military manpower costs. The first part of the chapter outlines a conceptual framework for understanding the manpower support establishment as a system. Viewing the components of the system over time provides a basis for understanding the evolution of military manpower costs to the FY 73 level. The second part covers military pay. The third part of the chapter treats the components of the total system costs of manpower. The cost of manpower is compared to the overall defense budget and to the average military strength. Finally, there is a discussion of the transfer of implicit taxes to explicit defense budget costs as the All-Volunteer Force is implemented.

The traditional view of military manpower costs encompasses only the pay and allowances of military personnel. We shall present an alternative approach that defines the total cost of military manpower; however, to provide perspective, the Military Personnel Appropriation is shown by Service below:

MILITARY PERSONNEL APPROPRIATION
(TOA in Billions)

	FY 64	FY 68	FY 71	FY 72	FY 73
Army	4.2	7.8	8.7	8.2	7.7
Navy	3.0	4.2	6.5	7.0	7.3
Marine Corps	.7	1.4	1.5	1.5	1.5
Air Force	4.4	5.7	4.7	5.1	5.4
Total	12.3	19.1	21.4	21.8	21.8

1/ See Secretary of Defense Report, page 48.

It is useful for the purpose of understanding total system manpower costs to compare expenditures on military manpower to expenditures on weapon systems. Weapon systems spending is done primarily in three stages associated with the life cycle of the system: Research & Development, Acquisition, and Operations & Maintenance. Similarily, manpower expenditures can be viewed in four categories: procurement, training, maintenance and retirement. Viewed this way, manpower costs include the full costs of these activities, not just the pay and allowances of military personnel.

Procurement costs are defined as those incurred in order to acquire a man and effect his transition from civilian life to a minimally trained member of the military establishment. Thus, procurement costs include the total costs of recruiting and examining, the cost of the Armed Services Information and Education Program, the cost of ROTC and Junior ROTC, the cost of ROC, the cost of the three Service academies and the cost of recruit training. Many servicemen undergo additional training to meet military requirements for men with specialized skills. Money allocated towards this end comprises the cost of training. Included in training costs are the salaries of men undergoing training, the salaries of instructors and support personnel and the money required to operate and maintain the physical training establishment. The maintenance cost of a man is defined as the cost of paying and supporting him as an operating unit in the trained military force. The cost of maintenance in a given year includes the pay of all active duty military personnel exclusive of those involved in procurement or training. Additionally included are medical costs, the Overseas Dependent Education Program, Defense Family Housing, the Homeowner's Assistance Program, the cost of PCS moves and the elements of Base Operating Support that support manpower (estimated to be 50% of the total BOS allocation exclusive of military pay). Retirement costs are those incurred in the payment of retirement benefits to retired military annuitants.

The following table shows the appropriations included in the four components of military manpower cost in FY 73.

MILITARY MANPOWER COSTS BY APPROPRIATION
FY 73 SUMMARY
(TOA in Billions)

	Procurement	Training	Maintenance	Retirement	Total
Research & Investment	.09	.93	.94	-	1.96
Operations & Maintenance	.35	.93	4.03	-	5.31
Military Personnel	1.31	2.69	17.84	-	21.84
Reserve Personnel	.06 a/	-	.01 b/	-	.07
Retired Pay Defense	-	-	-	4.36	4.36
Total	1.81	4.55	22.82	4.36	33.54

a/ Includes the pay of students in ROTC, Junior ROTC and ROC.
b/ Includes the cost of reserve medical units.

The table below summarizes the FY 73 military manpower costs by Service:

MILITARY MANPOWER COSTS
FY 73 SUMMARY
(TOA in Billions)

	Army	Navy	Marine Corps	Air Force	Total
Procurement	.96	.37	.18	.29	1.81
Training	1.29	1.67	.31	1.28	4.55
Maintenance	8.36	7.18	1.37	5.91	22.82
Retirement	1.56	1.09	.23	1.48	4.36
Total	12.18	10.31	2.09	8.96	33.54

The above components of military manpower cost are analyzed in detail below. Since military personnel pay is the largest element of each cost component, it will be discussed first.

B. Military Pay

The cost of paying active military personnel currently comprises 67% of total military manpower costs; 76% of all procurement costs, 60% of all training costs and 81% of all maintenance costs. Retirement costs include no military pay. The following table displays over time the costs of active duty military pay and allowances and how these costs are related to the average strength of the military. Also shown is the average yearly salary per man, which is the ratio of total pay costs to the average strength.

MILITARY PAY AND ALLOWANCE COSTS

	FY 64	FY 68	FY 71	FY 72	FY 73
Total Pay & Allowance Costs a/ ($ Billions TOA)	11.47	17.48	19.86	20.28	20.48
Average Military Strength (Millions)	2.69	3.44	2.89	2.54	2.40
Average Cost per Man ($)	4264	5081	6872	7984	8533

a/ Includes pay raises through 1/1/72; does not include permanent change of station travel or support of free world forces.

As the table shows, $9.01 billion more is programmed to be spent paying military personnel salaries in FY 73 than in FY 64. This is an increase of 79%. At the same time strength went down by 290,000 men. The difference between expenditures on pay in FY 64 and FY 73 is attributable to three factors: First, the size of the force has decreased. Second, the pay rates for each grade in the military have gone up. 1/ Third, the distribution of grade levels of both the officer and enlisted force has changed. For example, there are percentage wise more captains and fewer lieutenants in the FY 73 force relative to the FY 64 force. The effect of each of these factors on the difference between the manpower cost of the FY 64 and the FY 73 forces may be derived by sequentially altering the FY 64 force to match the characteristics of the FY 73 force.

The table below shows the cost of maintaining different forces with combinations of FY 64 and FY 73 manpower characteristics.

COMPARATIVE COSTS OF MILITARY PAY AND ALLOWANCES

	FY 64	Case 1	Case 2	FY 73
Size (Millions)	2.69	2.40	2.40	2.40
Average Pay Per Man ($)	4264	4264	8000	8533
Grade Mix	FY 64	FY 64	FY 64	FY 73
Total Pay & Allowance Costs ($ Billions)	11.5	10.2	19.2	20.5
Percentage Increase Over FY 64 Cost	0.0%	-11.3%	67.0%	78.3%

Reading the table across the columns, left to right, yields the magnitude of effect resulting from the change in each characteristic. The first column starts with the FY 64 programmed pay cost of $11.5 billion. The next column, Case 1, shows the effect of shrinking the FY 64 force to the FY 73 size, but using FY 64 pay rates and grade mix. The third column, Case 2, depicts what total expenditures on pay would be if the FY 73 force was paid at FY 73 salaries but with the FY 64 grade mix. This accounts for an additional $9 billion of the FY 73-FY 64 manpower cost difference. The remainder of the cost difference between FY 64 and FY 73 is due to grade creep. There will be relatively more officers and enlisted men of higher grades (and consequently higher salaries) in FY 73 than in FY 64. The cost of this grade mix difference, as shown in the table, is estimated to be about $1.3 billion.

1/ This is partially attributable to the fact that longevity and dependency pay both increased from FY 64 to FY 73.

The table also shows the percentage increase in cost over FY 64 contributed by each characteristic. The conclusion is that increases in pay rates have accounted for the major portion of the military pay cost inflation. The next largest effect is the reduction in cost resulting from a diminished force size in FY 73. The smallest effect, a 6.8% increase in cost, is attributable to changes in grade mix. There are many reasons for this change. The level of the 1964 grade ceilings caused promotion stagnation. During the Vietnam buildup men were promoted more rapidly. The recent rapid force reduction has created a situation where younger lower grade personnel are leaving the force at a much higher rate than higher grade personnel. The combination of Vietnam promotion rates followed by rapid reductions of lower grade personnel, has shifted the grade mix upwards despite slowed down promotions. In addition, increasing technological sophistication has created a demand for higher caliber individuals who cannot be acquired and retained at low grades. Even with the increase of grades, it can be argued that the responsibility of men has increased faster than their pay. For example, in WW II, a jeep was driven and maintained by an E-2. His annual pay was 3.1 times as much as the jeep cost. In 1971, a jeep is driven and maintained by an E-4, but his annual pay is only 1.3 times as much as the jeep costs. In WW II, a tank crew chief was an E-4 and his annual pay was 1/8th the cost of the tank. In 1971, the tank crew chief is an E-6, but his annual pay is 1/27th the cost of the tank.

C. Components of Military Manpower Costs

The following table displays how the four cost components of the military manpower system have varied over time. A description of each cost trend follows.

THE COMPONENTS OF MILITARY MANPOWER COSTS
(TOA in $ Billions)

	FY 64	FY 68	FY 71	FY 72	FY 73
Procurement	.78	1.53	1.52	1.65	1.81
Training	2.25	3.90	4.36	4.54	4.55
Maintenance	13.05	19.71	21.89	22.43	22.82
Retirement	1.21	2.09	3.39	3.93	4.36
Total Manpower Costs	17.29	27.23	31.16	32.55	33.54

Procurement Cost - The cost of manpower procurement in FY 73 is programmed to be about 2.3 times the cost of manpower procurement in FY 64. The reason for this increase may be explained by examining the three periods FY 64-FY 68, FY 68-FY 71, and FY 71-FY 73. The period FY 64-FY 68 spanned the buildup of the Vietnam War. During this period the average strength of the military increased by almost 30%. This massive military buildup required a correspondingly large procurement program in order to achieve the new manpower levels. For example, the cost of basic training essentially doubled from 522 million to 1130 million as a result of the buildup. From FY 68 to FY 71 the average strength in the military declined from 3.4 million to 2.9 million. At the same

time, however, the average yearly salary per man in the military rose from $5081 to $6872. Since military personnel salaries comprise about 76% of the total costs of procurement, the salary increases served to counterbalance the diminishing level of manpower, resulting in the same aggregate cost of procurement. The 290 million increase in procurement cost from FY 71 to FY 73 is due to the programmed salary increases, physical plant improvements and increased expenditures on recruiting that result from our commitment to a Volunteer Service.

Training Cost - The cost of training rose by 73% between FY 64 and FY 68, grew at a relatively slower rate until FY 72, and remained constant from FY 72 to FY 73. In a given year, the pay of active duty military personnel in the training system (including trainees) comprises about 60% of the total cost of training. The other 40% of training cost comes from expenditures on procurement, construction and pay of reserves and civilians. The cost growth in training in the FY 64-FY 68 period was due to the reaction of all these factors to the demands of the Vietnam War for trained military personnel. The FY 68-FY 72 cost growth was largely the result of increased pay for the military personnel in the training establishment.

Maintenance Cost - The cost of military manpower maintenance is primarily attributed to expenditures on military pay. Roughly 80% of the cost of maintenance is comprised of military pay. The 75% increase in maintenance cost from FY 64 to FY 73 is therefore readily explained by the 79% increase in total military pay over the same period.

Retirement Cost - DOD is the only department which includes retirement costs in its budget. Retirement costs of other Departments of the Federal Government are included in a separate fund. Including these costs in the Defense budget tends to distort comparisons, since retirement costs are incurred for past programs, not for the current or future programs represented in the rest of the budget. It is also important to note that retirement costs are the fastest growing of all manpower costs. Expenditures on retirement pay and benefits in FY 73 show a 260% increase over expenditures in FY 64. The reasons for this cost growth are twofold. First, the average number of retired military annuitants has risen from 411,000 in FY 64 to an estimated 937,000 in FY 73, an increase of about 128%. Second, the pay and benefits per man of these annuitants has increased from an average of $2944 per year in FY 64 to an average of $4486 per year in FY 73. This growth, however, is less than the salary growth per man in the active military. Therefore, the reason that retirement costs have demanded an increased percentage share of the manpower budget from FY 64 to FY 73 is attributable to the fact that the number of retirees has grown while the number of active military personnel has diminished.

The relationship of total manpower cost to the entire Defense budget is given below.

RELATIONSHIP OF MILITARY MANPOWER COSTS TO DOD BUDGET
(TOA in $ Billions)

	FY 64	FY 68	FY 71	FY 72	FY 73
Military Manpower Cost a/	17.29	27.23	31.16	32.55	33.54
DOD Budget (TOA)	50.77	75.67	75.10	78.09	83.18
Military Manpower Cost/Budget b/	34.1%	36.0%	41.5%	41.7%	40.3%

a/ These costs are exclusive of appropriations for National Guard, Reserve, and civilian personnel that are not related to supporting active military manpower. Total outlays for pay and related costs, including all National Guard, Reserve and civilian appropriations total $43.5 billion in FY 73 or 56% of total DOD outlays.

b/ The corresponding percentages when measured in outlays rather than TOA show a slight rise from about 38% in FY 71 to about 40% in FY 73. TOA includes current and future planned expenditures whereas outlays only include money expended in a given year and result in part from prior year TOA.

As the table indicates, from FY 64 to FY 71, there has been an average of about 1.1% rise per year in the percentage share of the DOD budget allocated to military manpower costs. Thus, the total manpower cost in these years increased at a slightly faster rate than the overall budget. Conversely, the programmed FY 73 manpower cost is a smaller fraction of the budget than in FY 71. This is in spite of the recent volunteer service military pay raise and reflects the fact that although the rate of growth in manpower cost has diminished since FY 71, the rate of growth in the remainder of the budget has increased.

A further way of viewing the cost of the military manpower system is to consider the relationship of the cost of the manpower system to the number of men in the system. The following table displays the joint evolution of average military strength and the total cost of operational manpower. Also shown for comparison with the previous table is the fraction of the DOD budget allocated to operational manpower. The cost of operational manpower includes procurement costs, training costs and maintenance costs, but excludes retirement costs. Retirement costs in a given year are not logically related to the size of the military in that year.

COST VERSUS STRENGTH

	FY 64	FY 68	FY 71	FY 72	FY 73
Operational Manpower Costs (TOA in $ Billions)	16.08	25.14	27.77	28.62	29.18
Average Active Military Strength (Millions)	2.69	3.44	2.89	2.54	2.40
Operational Manpower Cost/Budget	31.7%	33.2%	37.0%	36.7%	35.1%
Per Capita Cost ($)	5,978	7,308	9,609	11,268	12,158

The per capita cost is the operational manpower cost divided by the average active military strength. This number is an aggregate measure of the cost per man in the military manpower system in a given year. As the table indicates, the cost per man in FY 73 is slightly over twice the cost per man in FY 64. This cost growth reflects pay raises and grade mix differences as well as increased costs of procurement, operations and maintenance, and construction that are included in military manpower costs.

D. Transfer of Implicit Taxes to Explicit Budget Costs

Historically the cost of military manpower has been shared by both the individual soldier and the Department of Defense. It is useful to examine the changing nature of this relationship.

Under a draft system some men are unwillingly inducted into the military. The difference between what these men are paid and the salary necessary to replace them with true volunteers is an imputed tax. It is estimated that the average tax paid by each non-volunteer over his term of service in FY 68 was $5,000. The estimated cost of eliminating this tax in FY 68 by raising military pay would have been $8 billion. 1/ This amount when added to the $19.1 billion military personnel appropriation actually authorized in that year gives a total economic pay cost of $27.1 billion, 70% of which was borne by DOD.

If there had been no military pay raises between FY 68 and FY 73, the FY 73 military personnel appropriation would total roughly $14 billion instead of the actual $21.8 billion. The remaining $7.8 billion is a measure of the cost borne by the DOD budget of removing the resulting imputed tax burden. This cost has two components. The first component, about 70% of the cost of removing the imputed tax, results from the fact that civilian pay rose between FY 68 and FY 73. Across the board military pay raises during that period were designed to keep military and civilian pay in about the same relationship as in FY 68. The second component (about $2.4 billion) results from pay raises designed to attract enough men for an all-volunteer force.

1/ While these costs would have appeared in the DOD budget, the costs to the U.S. Treasury would be less due to increased revenues from income tax.

The pay raises between FY 68 and FY 73 have acted to reduce the imputed tax paid by young people in the military and increase the share of total economic cost borne by DOD. Thus, more manpower costs are explicitly shown in the DOD budget. By end FY 73 the imputed tax will approach zero concurrent with the transition to an all-volunteer force. Except for the draftees in the force from prior years, all men entering the force will do so by choice and so will not be paying an imputed tax. For the first time, the military personnel appropriation ($21.8 billion in FY 73) will approximate the full cost of pay of military personnel.

VII

FORWARD DEPLOYMENTS

A. Rationale for Forward Deployments

We maintain forward deployments of our forces in order to accomplish the following objectives:

1. To help deter aggression by demonstrating to potential enemies and to our allies the U.S. resolve to honor its commitments;

2. To enable the United States to assist our allies in collective defense in the event they are attacked; and

3. To provide the President with the flexibility necessary in responding promptly to contingencies.

At the end of FY 71, we had about 800,000 men stationed overseas, including those in Navy ships. Of the 800,000, approximately 250,000 were in Vietnam or in ships offshore, 300,000 were in Europe and related areas, 200,000 were in the Western Pacific area, and 50,000 were in various other foreign countries and areas.

As the Vietnamization program continues, and as the forces of our allies are further modernized and improved in consonance with the Nixon Doctrine, we may anticipate adjustments in our deployments. However, these changes will be undertaken only after full consultation with our allies, and only when our collective security interests permit.

In determining whether forces are to be deployed overseas or retained in the U.S., a number of factors must be considered. There are clear advantages and disadvantages of overseas deployments, so a balance must be struck for each area which depends on the threat, the military requirements peculiar to the area, costs, and political considerations.

The advantages of forward deployments include:

- Immediate availability in the event of a crisis;
- Greater assurance to our Allies of the firmness of our commitments;
- Greater deterrent to a potential enemy; and
- Reduced requirement for mobility forces.

The disadvantages include:

- Some additional costs related to personnel moves and rotation base;
- Balance of payments costs;
- Potential political problems caused by the presence of large numbers of American personnel in a foreign country; and
- Adverse impact on morale if separated from families.

The advantages of forward deployments are greatest for our land forces. Land forces depend on heavy and bulky weapons and support equipment. Moving large land forces rapidly (e.g., within 30 days) from the U.S. to a conflict area, therefore, requires large and very costly airlift forces, or a mix of airlift and forward positioning of major equipment items. Even if less rapid reinforcement is acceptable, sealift needs could be large.

Tactical air forces are less dependent on forward deployments for immediate employment because additional planes can be quickly flown in during a period of crisis. For this reason, we have forward deployed a relatively smaller percentage of our tactical air forces than ground forces.

Naval forces forward deployed consist primarily of the 6th Fleet in the Mediterranean and the 7th Fleet in the Western Pacific. The 6th Fleet and Air Force tactical units provide the U.S. contribution to Allied defense of the southern NATO flank and serve as a significant counterweight to the Soviet influence in the Mediterranean area. The 7th Fleet as well as Air Force tactical air forces supports our Southeast Asia operations and help protect Taiwan, Japan, and Korea from threats to the sea lanes. Naval forces, with their embarked Marine Amphibious Forces, provide both potential ground and air forces on station during a crisis situation.

The political impact of changes in forward deployment cannot be ignored. Where we have had troops stationed in a particular country for a decade or more, the sudden removal of those troops can have a destabilizing political effect, regardless of the analytical rationale or assurances of continued commitment which may accompany the redeployments.

B. NATO Deployments

U.S. forces deployed in NATO Europe are now our largest overseas deployment. Therefore, they are discussed below in more detail.

We have deployed in the European theater at the present time an Army combat force of 4 1/3 divisions and 29 tactical air squadrons. In addition, many of our CONUS based forces, including Navy ships and especially the dual-

based REFORGER Army units and the CRESTED CAP Air Force units, are firmly committed to NATO. As the President noted in his 1971 Foreign Policy Report, the total assets available to NATO today are substantial because:

> "No token presence could serve our purpose. Our substantial contribution of United States forces -- about 25 percent of NATO's peacetime capabilities in Central Europe -- insures the viability of the strategy of flexible response. It enables us to found Alliance defense on something other than reliance on the threat of strategic nuclear war. It is the basis of our Allies' confidence in us. It links European defense to a common strategy and to the nuclear power of the United States."

The FY 73 Budget provides for the maintenance of our current force capabilities in Europe in order to demonstrate to our European Allies that we are doing our full share in the common defense, and that we expect them to maintain and improve their own forces. This policy is consistent with the President's pledge 3 December 1970, that:

> ".... given a similar approach by the other Allies the United States would maintain and improve its own forces in Europe and would not reduce them except in the context of reciprocal East-West action."

In NATO, the firmness of the U.S. commitment is important for political and military stability. Our Allies will continue to display anxiety about any U.S. reduction in forward deployed forces.

The European countries, like the U.S., are faced with competing demands for their resources, including the skilled manpower necessary to maintain modern arms. The resurgence of concern about the Soviet threat that followed the Czech crisis, the necessity they felt to persuade the U.S. to keep substantial forces in Europe, and the hope for a mutual force reduction with the Warsaw Pact have succeeded in arresting some downward trends in Allied forces and given them a renewed resolve to improve those forces.

At the NATO Ministerial meetings a year ago, European political leaders evidenced a new spirit towards NATO -- one in which our Allies fully recognize the existing realities and resolved on their own to assume more of the defense burden. Three items of particular significance emerged from these meetings. First, the Ministers approved the conclusions and recommendations of the NATO AD-70 Study undertaken during the preceding six months. The Study highlighted the need for more conventional deterrence and pointed out

specific inadequacies in existing NATO capabilities. There was a unanimous feeling that more must be done in the conventional field and that modern and sufficient NATO tactical and strategic nuclear capabilities must be maintained.

Second, while the Ministers reaffirmed the importance they attached to Mutual and Balanced Force Reductions (MBFR), they noted that Warsaw Pact countries have not directly responded to past evidence of NATO interest for such reductions. Consequently, they understandably did not go beyond the previous Rome communique in their treatment of Mutual and Balanced Force Reductions.

Third, concerning burden sharing, as was pointed out earlier, the ten European nations agreed among themselves to provide almost a billion dollars of additional expenditures over the next five years, divided between improvements to their own forces and contributions to an additional infrastructure program for better communications and aircraft shelters. This agreement is the most tangible evidence yet of European recognition that Europe must do more in its own behalf. The agreement also represents the first significant NATO endeavor undertaken solely by European members with the United States playing no direct role. This demonstration of European awareness of strategic, fiscal, manpower, and political realities, and a determination to face them, will be of substantial benefit to both Europe and the United States. This same spirit was maintained during 1971 as our Allies took steps to implement agreed force improvements and to increase defense budgets.

C. Summary of Present and Planned Deployments

The table below summarizes our present and planned deployments:

TOTAL DOD MILITARY MANPOWER BY GEOGRAPHIC LOCATION a/
(Authorized End Fiscal Year in Thousands)

	FY 71 (Actual)	FY 72	FY 73
Total Military Manpower	2,714	2,392	2,358
Total U.S. Territories, Southeast Asia b/	2,214	1,892	1,874
Total Foreign Countries, less Southeast Asia	500	500	484
Western Pacific	169	171	156
Europe and Related Areas	318	319	319
Other Foreign Countries & Areas	13	10	9
Navy/Marine Corps Forces Deployed Afloat - Included in Above Foreign Areas	(62)	(64)	(64)

a/ All geographic areas include Naval and Marine Forces afloat in those areas.

b/ SVN strength as of May 1972 is projected to be 69,000. The exact phasing of further withdrawals has not been decided.

VIII

SUMMARY OF MILITARY MANPOWER REQUIREMENTS

Summary - DOD Military Manpower by Service

Our FY 72 military manpower requirements have been developed by summing the Mission Force, Other Mission and General Support manpower needs discussed in Chapters III-V. This chapter summarized the manpower requirements by Service and describes the method of calculating average strength (man-years).

The following Service summaries, arrayed by Major Mission and Support categories, include civilian manpower programmed for FY 73 for comparative purposes.

ARMY MILITARY MANPOWER REQUIREMENTS
(Active Duty End Strengths in Thousands; End of Fiscal Years)

	FY 71	FY 72	FY 73	FY 73 (Civilians)
Mission Forces				
Strategic Forces	6	7	7	7
General Purpose Forces				
Land Forces	562	432	435	35
Mobility Forces	2	1	1	6
Total General Purpose Forces	564	433	435	41
Other Mission				
Intelligence and Security	32	25	20	7
Communications	16	14	13	5
Research and Development	9	9	9	21
Support to Other Nations	15	10	10	3
Total Other Mission Forces	72	58	52	37
General Support				
Base and Individual Support	182	144	139	184
Training	261	184	175	17
Command	29	25	24	45
Logistics	10	10	9	109
Total General Support	482	363	347	355
(Non-Mission Forces General Support) a/	(448)	(330)	(312)	(256)
Total Army	1,123	861	841	440

a/ As was pointed out in Chapters I and V, comparisons among the Services are invalid because of the differences in structure and the resultant differences in defining the components of each Major Mission and Support category. The alternative view of General Support shown in parentheses represents the effect of removing direct support of Major Mission forces from the General Support category. Chapters I, III, and V include a more complete description of this problem.

NAVY MILITARY MANPOWER REQUIREMENTS [a]
(Active Duty End Strengths in Thousands; End of Fiscal Years)

	FY 71	FY 72	FY 73	FY 73 (Civilians)
Mission Forces				
Strategic Forces	19	19	19	1
General Purpose Forces				
Land Forces	2	3	3	-
Tactical Air Forces	60	60	65	-
Naval Forces	205	205	194	-
Mobility Forces	3	3	3	10
Total General Purpose Forces	270	271	264	10
Other Mission				
Intelligence and Security	18	15	14	5
Communications	10	10	9	4
Research and Development	8	8	8	39
Support to Other Nations	4	5	5	1
Total Other Mission Forces	41	38	36	49
General Support				
Base and Individual Support	124	107	111	69
Training	125	124	131	10
Command	36	35	33	23
Logistics	8	8	8	159
Total General Support	293	274	283	261
(Non-Mission Forces General Support) [b]	(216)	(199)	(208)	(221)
Total Navy	623	602	602	320

[a] Includes Navy personnel serving with the Marine Corps.

[b] As was pointed out in Chapters I and V, comparisons among the Services are invalid because of the differences in structure and the resultant differences in defining the components of each Major Mission and Support category. The alternative view of General Support shown in parentheses represents the effect of removing direct support of Major Mission forces from the General Support category. Chapters I, III and V include a more complete description of this problem.

MARINE CORPS MILITARY MANPOWER REQUIREMENTS [a]
(Active Duty End Strengths in Thousands; End of Fiscal Years)

	FY 71	FY 72	FY 73	FY 73 (Civilians)
Mission Forces				
Strategic Forces	*	*	*	-
General Purpose Forces				
Land Forces	74	78	79	-
Tactical Air Forces	27	27	27	-
Naval Forces	1	1	1	-
Total General Purpose Forces	102	106	107	-
Other Mission				
Intelligence and Security	2	2	2	-
Communications	*	*	*	-
Research and Development	*	*	*	-
Support to Other Nations	*	*	*	-
Total Other Mission Forces	2	2	2	-
General Support				
Base and Individual Support	45	35	35	13
Training	51	45	44	2
Command	10	9	9	2
Logistics	2	1	1	3
Total General Support	108	90	89	20
(Non-Mission Forces General Support) [b]	(79)	(69)	(66)	(9)
Total Marine Corps	212	198	198	20

* Less than 500 spaces.

[a] Includes Marine Corps personnel serving with the Navy.

[b] As was pointed out in Chapters I and V, comparisons among the Services are invalid because of the differences in structure and the resultant differences in defining the components of each Major Mission and Support category. The alternative view of General Support shown in parentheses represents the effect of removing direct support of Major Mission forces from the General Support category. Chapters I, III and V include a more complete description of this problem.

AIR FORCE MILITARY MANPOWER REQUIREMENTS
(Active Duty End Strengths in Thousands; End of Fiscal Years)

	FY 71	FY 72	FY 73	FY 73 (Civilians)
Mission Forces				
Strategic Forces	104	104	102	9
General Purpose Forces				
Tactical Air Forces	79	80	75	13
Mobility Forces	68	60	53	14
Total General Purpose Forces	147	140	128	27
Other Mission				
Intelligence and Security	38	33	31	7
Communications	29	28	27	8
Research and Development	20	19	19	23
Support to Other Nations	2	2	12	1
Total Other Mission Forces	89	82	89	39
General Support				
Base and Individual Support	229	227	221	112
Training	112	107	108	10
Command	64	60	56	23
Logistics	10	11	13	79
Total General Support	415	404	398	225
(Non-Mission Forces General Support) a/	(194)	(193)	(194)	(150)
Total Air Force	755	730	717	300

a/ As was pointed out in Chapters I and V, comparisons among the Services are invalid because of the differences in structure and the resultant differences in defining the components of each Major Mission and Support category. The alternative view of General Support shown in parentheses represents the effect of removing direct support of Major Mission forces from the General Support category. Chapters I, III and V include a more complete description of this problem.

Average Strengths

Throughout this Report we have focused on end strengths when discussing manpower numbers. This is convenient when relating manpower spaces to forces and other units. However, for budget purposes we must deal in manyears (average strength), for it is manyears that we actually pay for. Each Service computes its manyear requirements in the same way; for each month in the fiscal year, the beginning inventory of personnel is adjusted by estimated gains and losses to arrive at an ending inventory. When these separate monthly levels are averaged over the entire year, the result is the average strength or manyears. Since gains and losses fluctuate during the year the annual average strength seldom equals the simple average of the beginning and end year strengths.

The Navy beginning and end year strengths are the same at 602,000. Because of the nature of their month-by-month program, the Navy expects to have an average strength of about 601,000.

The Marine Corps strengths also are unchanged during FY 73, remaining at 198,000. In this case, the average strength also is expected to be 198,000.

The Air Force begins FY 73 at 730,000 and ends at 717,000. A straight-line path between the two points would yield an average of 724,000. Because the Air Force program loses strength more gradually in the early part of the year than a straight-line path would dictate, the Air Force estimates a requirement for an average of 727,000.

Generally the variance between the straight-line average and the programmed manyears is relatively small. However, in the case of the Army's manpower for 1973 the difference is sufficiently large to require more explanation. The Army estimates a requirement for about 870,000 manyears in FY 73 as compared to the straight-line average of the end strengths of 851,000 manyears (from 861,000 to 841,000). The reason for this phenomenon is as follows:

We attempt to follow the basic principle that units authorized to be in the force should be manned with properly trained individuals at approved manning levels. From this principle, we derive two corollaries:

1. When a trained man departs from a unit and leaves the Service, a trained replacement should be available to take his place.

2. Because training takes about five months (longer for many skills), untrained men must be added to the Services five months before losses occur.

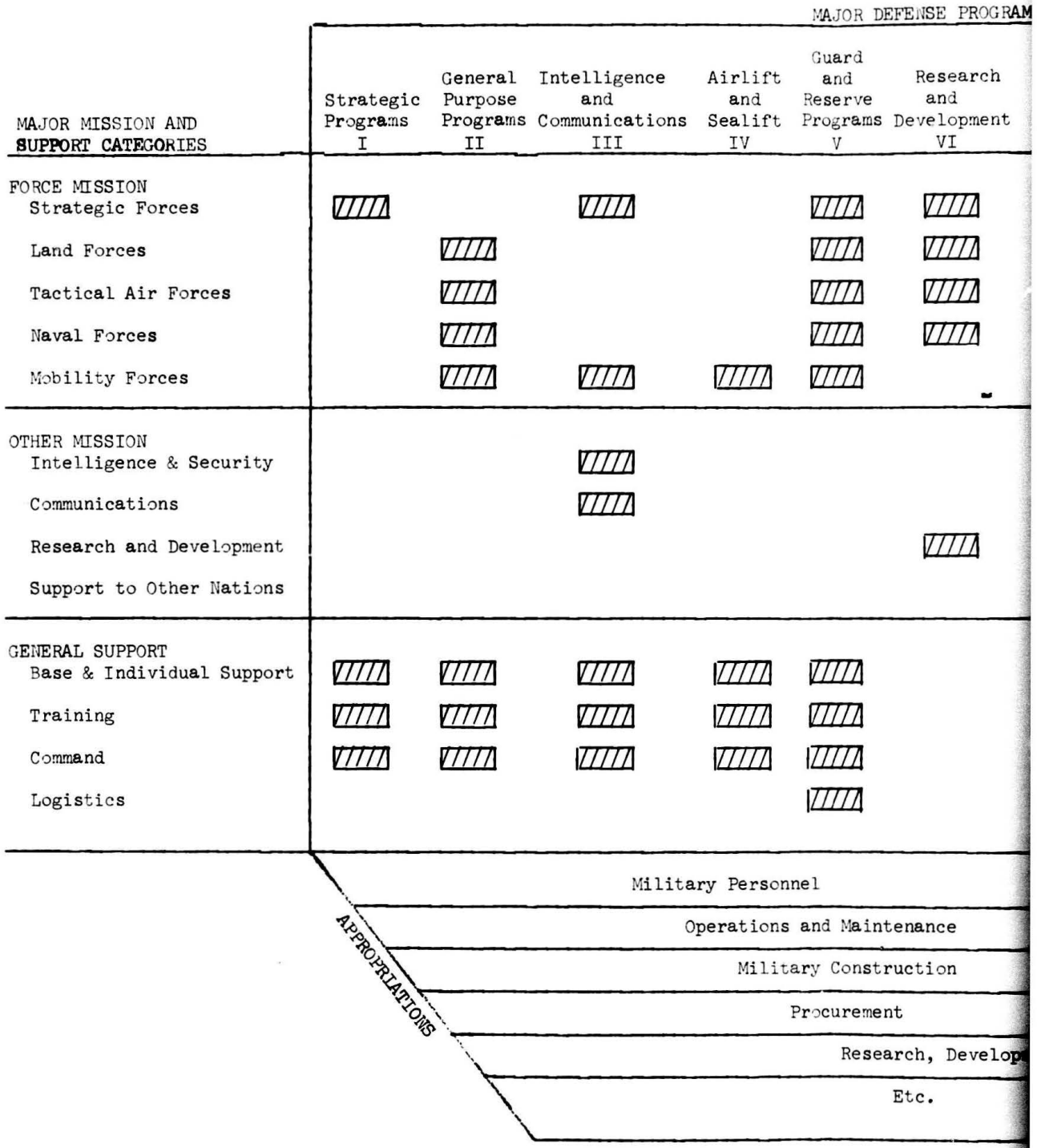
The principle and the corollaries cannot be entirely adhered to by the Army in FY 72. To live within the manyear and dollar constraints the Army is forcing people out early and cannot afford to bring in the required numbers of new men to replace them.

Accelerating its losses in FY 72 to bring its average strength down to the limit set by Congress, the Army encountered severe manpower and readiness problems. (In FY 72, the Army was required to reduce its average strength by 50,000 below its budget program. This resulted in a reduction in one year of 262,000 in Army end strength which had been planned to take place over a two year period. Reductions in the Air Force and Navy were 3,000 each.) By the end of FY 72, the Army will have separated some 480,000 men and women, with 316,000 affected by early releases.

At the beginning of FY 73, the principles and corollaries must again be followed or the Army will continue to be understrength. Starting in July the Army must take in the full number of recruits to replace trained losses that will occur about five months later in the year. During this period, however, offsetting losses that would normally be occurring will not take place because many people that would normally be discharged during the first half of FY 73 will already have been discharged in FY 72 as a result of early release policies. These abnormally low losses, combined with a resumption of normal gains, produce strengths in the first half of FY 73 higher than the 861,000 authorized at end FY 72. As losses return to normal during the latter half of FY 73, strengths decline and the Army ends FY 73 at the authorized level of 841,000. However, the mid-year rise in strength produces an annual average strength (manyears) greater than the average of the beginning and end strengths.

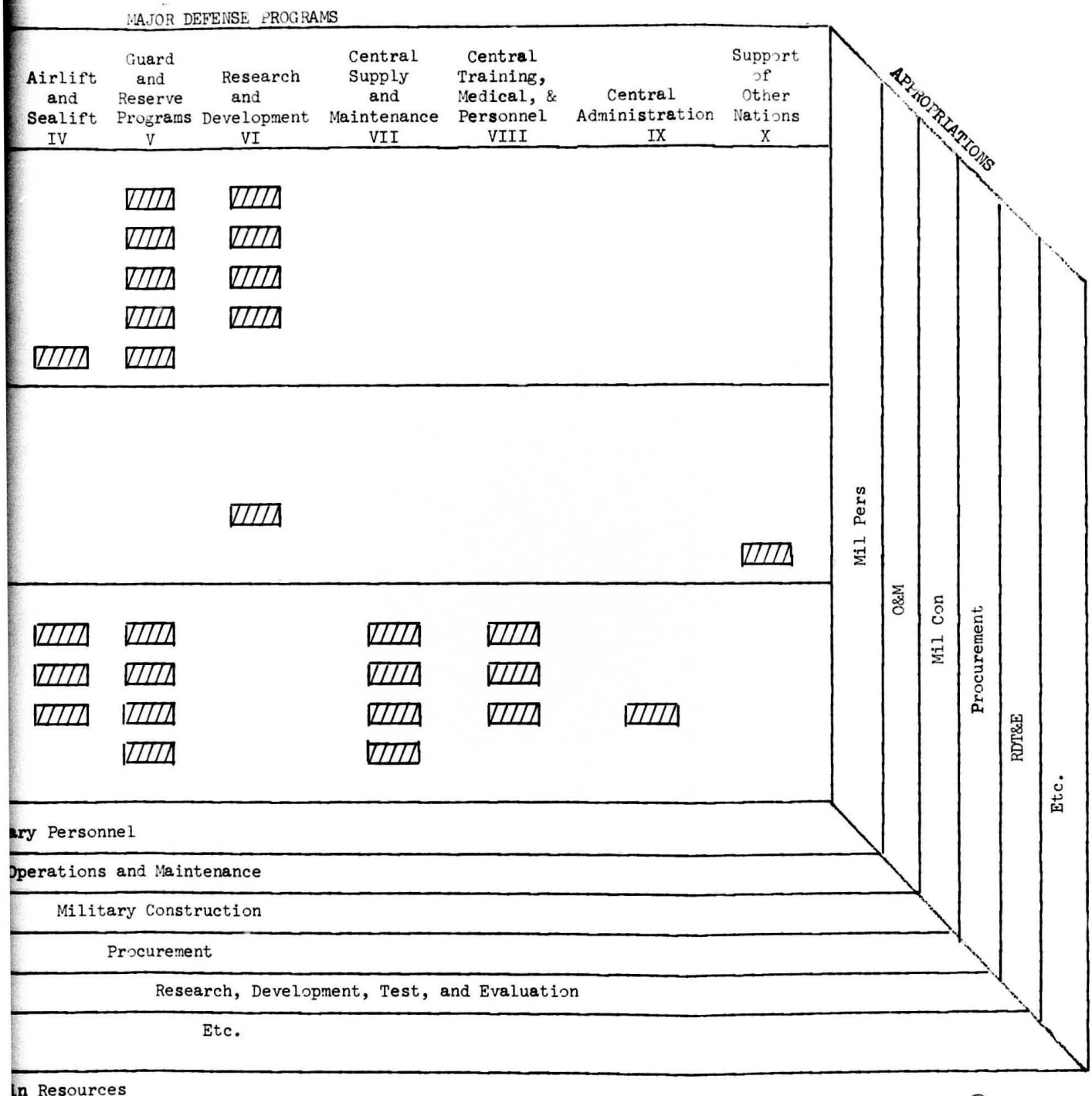
APPENDIX A

RELATIONSHIP OF MAJOR DEFENSE PROGRAMS, MAJOR MISSION AND SUPPORT FUNCTIONS AND APPROPRIATIONS



Shaded Boxes Indicate Intersecting Cells Which Currently Contain Resources

RIATIONS


MAJOR DEFENSE PROGRAMS
Airlift and Sealift IV
Guard and Reserve Programs V
Research and Development VI
Central Supply and Maintenance VII
Central Training, Medical, & Personnel VIII
Central Administration IX
Support of Other Nations X
APPROPRIATIONS
Mil Pers
O&M
Mil Con
Procurement
RDT&E
Etc.
ary Personnel
Operations and Maintenance
Military Construction
Procurement
Research, Development, Test, and Evaluation
Etc.
In Resources

2

APPENDIX B

STRATEGIC FORCES

Unit	Location	Mission	Primary Applicable Treaty
AIR FORCE			
1054 ICBM	CONUS	Deter attack on the U.S. and its allies.	-
30 Bomber Squadrons (B-52/FB-111)	1 Guam 29 CONUS[a/]	Deter attacks on the U.S. and its allies.	-
38 Tanker Squadrons	1 SEA 3 - Canada, Spain Alaska 34 - CONUS		-
7 Interceptor Squadrons	CONUS	Restrict unauthorized overflight of U.S. and defend against small bomber attacks with strategic warning of one or two days.	NORAD Agreeme
NAVY			
41 SSBNs	Charleston, S.C. Rota, Spain Holy Loch, Scotland Guam	Deter attack on the U.S. and its allies.	-
ARMY			
21 SAM Batteries	CONUS	To back up interceptors in defending against small bomber attacks.	

a/ Three B-52 squadron equivalents support SEA requirements on a rotational basis.

	Primary Applicable Treaty	Strategy Supported	Other Potential Deployments
.S.	-		None
	-	Maintain an adequate second-strike capability to deter an all-out surprise attack on our strategic forces.	
	-	Provide no incentive for the Soviet Union to strike the United States first in a crisis.	Potential for worldwide contingency deployments on not-to-interfere basis with primary strategic mission.
l ıd	NORAD Agreement	Prevent the Soviet Union from gaining the ability to cause considerably greater urban/industrial destruction than the United States could inflict on the Soviets in a nuclear war.	
	-	Defend against damage from small attacks or accidental launches.	Worldwide
ors			None

a rotational basis.

GENERAL PURPOSE FORCES

ARMY DIVISIONS

UNIT	LOCATION	MISSION	PRIMA
1st Armored Division 3d Armored Division 3d Infantry Division (M) 8th Infantry Division (M) Bde, 1st Inf Division (M)	West Germany	Force presence. In concert with allied and other U.S. forces, stop a Warsaw Pact ground attack and stabilize the military situation without major loss of NATO territory.	NORTH A A treat 1949, b agree t against in Euro shall b attack and . . acting constit . . . a forthwi and in other p as it d includi forces.
1st Infantry Division (M) (REFORGER) (minus 1 brigade)	Ft. Riley, Kansas	Early ground combat reinforcement for NATO forces.	North A 4 April
2d Armored Division 4th Infantry Division (M) 1st Cav Division (TRICAP) 9th Infantry Division 101st Airmobile Division 82d Airborne Division	Ft. Hood, Texas Ft. Carson, Colorado Ft. Hood, Texas Ft. Lewis, Wash. Ft. Campbell, Ky. Ft. Bragg, N.C.	To provide Strategic Reserve and ground forces for worldwide deployment.	
2d Infantry Divison	South Korea	Force presence. Provides ground combat and security forces for South Korea.	Mutual a bilat October party " attack either would b peace a each Pa the com ance wi process
25th Infantry Division	Hawaii	Pacific Command Ground Combat Reserve	SEATO

MISSION	PRIMARY APPLICABLE TREATY	STRATEGY SUPPORTED	OTHER POTENTIAL DEPLOYMENTS
nce. In concert with other U.S. forces, w Pact ground attack ze the military sit- out major loss of ory.	NORTH ATLANTIC TREATY A treaty, signed April 4, 1949, by which the partners agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all; and . . . each of them acting in accordance with constitutional processes . . . attacked by taking forthwith individually and in concert with the other partners such action as it deems necessary including the use of armed forces.	Our NATO strategy seeks to deter all forms of aggression against NATO through the maintenance of a full spectrum of nuclear and non-nuclear military capabilities and application of a forward defense concept.	
nd combat rein- for NATO forces.	North Atlantic Treaty 4 April 1949.	Same as above.	
Strategic d ground worldwide .		These forces are applied to the requirements for meeting minor contingencies and providing for a strategic reserve and assistance to allies.	Worldwide
ence. Provides bat and security South Korea.	Mutual Defense Treaty, a bilateral agreement, signed October 1, 1953, whereby each party "recognizes that an armed attack in the Pacific area on either of the Parties . . . would be dangerous to its own peace and safety" and that each Party "would act to meet the common danger in accordance with its own constitutional processes."	Forward deployed U.S. forces are an integral link in the spectrum of deterrence and demonstrate to enemies and allies the U.S. resolve to honor commitments. Should an attack occur, these forces allow the U.S. to assist allies in timely defense.	Worldwide
mmand Ground erve	SEATO	Provides force for Pacific Area Contingencies. Provides force presence.	Worldwide

GENERAL PURPOSE FORCES

NAVY SHIPS AND AIRCRAFT

UNIT [a]	LOCATION	MISSION
Second Fleet & Western Atlantic 4 CVAs/CVWs 1 CVS/CVSG 77 Surface Combatants 4 Amphibious Ready Groups [b] 10 VP Squadrons Associated Support Ships & Attack Submarines	U.S. East Coast & Western Atlantic	Maintain Atlantic Sea Lanes in NATO conflict. Provide Tactical Air and Amphibious "projection" forces in support of NATO land war. Provide crisis management or contingency force in Atlantic. Provide peacetime naval presence throughout Atlantic.
Sixth Fleet 2 CVAs/CVWs 19 Surface Combatants 1 Amphibious Ready Group [b] 2 VP Squadrons Associated Support Ships & Attack Submarines	Mediterranean	Maintain Mediterranean Sea Lanes in NATO conflict. Provide Tactical Air and Amphibious "projection" forces in support of NATO land war, particularly any Warsaw Pact initiatives against the NATO southern flank. Provide crisis management or contingency force in Mediterranean. Provide peacetime naval presence throughout Mediterranean.
Middle East Force 1 Flagship [c] 2 Surface Combatants [d]	Persian Gulf, Arabian Sea and Indian Ocean	Provide peacetime naval presence in Persian Gulf, Arabian Sea and Indian Ocean. Provide limited contingency force in the area.
First Fleet and Eastern Pacific 5 CVAs/CVWs 1 CVS/CVSG 80 Surface Combatants 4 Amphibious Ready Groups [b] 7 VP Squadrons Associated Support Ships & Attack Submarines	U.S. West Coast & Eastern Pacific	Maintain Pacific Sea Lanes in NATO or Asian conflict. Provide Tactical Air and Amphibious "projection" forces to reinforce Western Pacific forces and in support of Asian conflict. Provide crisis management or contingency force in Eastern Pacific and to reinforce Western Pacific forces. Provide peacetime naval presence in Eastern Pacific.
Seventh Fleet & Western Pacific 3 CVAs/CVWs 22 Surface Combatants 2 Amphibious Ready Groups [b] 5 VP Squadrons [e] Associated Support Ships & Attack Submarines	Western Pacific	Maintain Western Pacific Sea Lanes in NATO or Asian conflict. Provide Tactical Air and Amphibious "projection" forces in support of Asian conflict. Provide crisis management or contingency force in Western Pacific. Provide peacetime naval presence throughout Western Pacific.

MISSION	PRIMARY APPLICABLE TREATY	STRATEGY SUPPORTED	OTHER POTENTIAL DEPLOYMENTS
in Atlantic Sea Lanes in NATO ict. e Tactical Air and Amphibious ection" forces in support of land war. e crisis management or con- ncy force in Atlantic. e peacetime naval presence ghout Atlantic.	NATO	Provide for initial defense of NATO Europe. Provide for the protection of naval forces and shipping. Provide a strategic reserve.	Redeployment worldwide possible. Provides capability for rapid reinforcement of NATO in Eastern Atlantic and Mediterranean.
in Mediterranean Sea Lanes TO conflict. e Tactical Air and ibious "projection" forces pport of NATO land war, icularly any Warsaw Pact atives against the NATO ern flank. e crisis management or ngency force in terranean. e peacetime naval nce throughout terranean.	NATO	Provide for initial defense of NATO Europe. Provide for the protection of naval forces and shipping. Provide appropriate forward deployment of U.S. forces.	Redeployment worldwide possible. Deployment of entire force elsewhere unlikely due to need of U.S. naval presence in the Mediterranean.
e peacetime naval presence rsian Gulf, Arabian Sea Indian Ocean. e limited contingency in the area.		Provide appropriate forward deployment of U.S. forces.	Redeployment worldwide possible. Force provides limited military capability.
in Pacific Sea Lanes in or Asian conflict. e Tactical Air and ibious "projection" es to reinforce Western fic forces and in support sian conflict. e crisis management or ingency force in Eastern fic and to reinforce ern Pacific forces. e peacetime naval ence in Eastern Pacific.	NATO SEATO Various Pacific Mutual Defense & Aid Treaties.	Provide for joint defense of Asia (Korea or Southeast Asia). Provide for protection of naval forces and shipping. Provide a strategic reserve.	Redeployment worldwide possible. Provides capability for reinforcement of either NATO or Western Pacific forces.
ain Western Pacific Sea Lanes ATO or Asian conflict. de Tactical Air and Amphibious jection" forces in support sian conflict. de crisis management or ingency force in Western fic. de peacetime naval presence ughout Western Pacific.	NATO SEATO Various Pacific Mutual Defense & Aid Treaties.	Provide for joint defense of Asia (Korea or Southeast Asia). Provide for protection of naval forces and shipping. Provide appropriate forward deployment of U.S. forces.	Redeployment worldwide possible. Deployment of entire force elsewhere unlikely due to need of U.S. Naval presence in the Western Pacific.

FOOTNOTES

a/ Figures shown are average figures. Forces in the Mediterranean consist of units deployed on a rotational basis from U.S. East Coast homeports. Forces in the Western Pacific consist of units deployed on a rotational basis from U.S. West Coast homeports. Capabilities of individual ship types are discussed fully in the text of the Report.

b/ An Amphibious Ready Group is one-ninth of a Marine Amphibious Force (MAF). It consists of 3 to 5 amphibious ships with a Marine Battalion Landing Team embarked. Only the ARGs forward deployed (in the Mediterranean, the Western Pacific and periodically in the Caribbean) are actually constituted, (the amphibious shipping operated as a squadron with Marine units embarked).

c/ The flagship of the Middle East Force (MIDEASTFOR) is the La Salle, an amphibious assault ship configured for flagship duties, which is homeported at Bahrein in the Persian Gulf.

d/ These forces consist of two destroyers deployed on a rotational basis from U.S. East Coast homeport.

e/ Includes one VP squadron in Alaska.

GENERAL PURPOSE FORCES

MARINE AMPHIBIOUS FORCE (MAF)

UNIT	LOCATION	MISSION	PRIMARY APPLICABLE TREATY	STRATEGY SUPPORTED	OTHER POTENTIAL DEPLOYMENTS
I MAF					
(1st Marine Division/ 3d Marine Aircraft Wing Team, plus supporting force troops elements.)	Camp Pendleton, Calif/ MCAS, El Toro, Calif. and MCB, 29 Palms, Calif.	Pacific Command Reserve Together with Navy Components of the amphibious team provide ground/air combat forces to project sea power ashore.	SEATO Bilateral Mutual Defense Treaties	Provides forces primarily for Pacific area contingencies. These forces can be applied to the requirements for meeting major or minor contingencies worldwide and providing assistance to Allies.	To NATO/ Worldwide
II MAF					
(2d Marine Division/ 2d Marine Aircraft Wing Team, plus supporting force troops elements.)	Camp Lejeune, N.C./ MCAS, Cherry Point N.C. and MCAS, Quantico, Va. Fwd deployed units; Guantanamo Bay, Cuba Mediterranean, Caribbean USS Coral SEA (VMA(AW) 244)	Atlantic Command Reserve Provide to CINC's ground/air combat forces with an amphibious forcible entry capability.	NATO	Provides forces primarily for Atlantic and European (NATO) Area contingencies. Provides forward afloat deployed force presence in the Eastern Atlantic/ Mediterranean areas and the Caribbean area. These forces can be applied to the requirements for meeting major or minor contingencies worldwide and providing assistance to Allies	To Pacific Command/ Worldwide
III MAF					
(3d Marine Division(-)/1st Marine Aircraft Wing Team, plus supporting force troops elements.)	Camp Butler, Okinawa/MCAS, Iwakuni, Japan and MCAS, Futema, Okinawa South China Sea	Pacific Command Reserve. Provides forward deployed combat force in the Western Pacific Provide to CINC's ground/air combat forces with amphibious forcible entry capability.	SEATO Bilateral Mutual Defense Treaties	Provides force for Pacific area contingencies. Provides forward afloat deployed presence in the Western Pacific. These forces can be applied to the requirements for meeting major or minor contingencies worldwide, and providing assistance to Allies.	To NATO/ Worldwide
1st MARINE BRIGADE					
(Regimental Landing Team 3/Marine Aircraft Group 22, plus supporting force troops elements.)	Marine Corps Air Station, Kaneohe Bay, Hawaii	Pacific Command Reserve. Early reinforcement of forward deployed forces in the Western Pacific. Provide to CINC ground/air combat forces with an amphibious forcible entry capability.	SEATO Bilateral Mutual Defense Treaties	These forces could be applied to meeting minor contingency requirements.	To NATO/ Worldwide

GENERAL PURPOSE FORCES
AIR FORCE TACTICAL AIRCRAFT

Unit (Fighter/Attack Squadron)	Location	Mission	Primary Applicable Treaty	S
21 Squadrons	U.K., West Germany, Netherlands, Italy, Turkey, and Spain	Provide close air support, gain air superiority, and provide interdiction for a NATO conflict.	NATO	To d Euro we h to c conv NATO
16 Squadrons	Southeast Asia, Philippines, Okinawa, and Republic of Korea	Provide close air support, gain air superiority and provide interdiction for an Asian conflict.	SEATO Bilateral Mutual Defense Treaties	To d To e capa alli conv Asia incl
35 Squadrons	CONUS, Alaska and Iceland	Provide reinforcement of tactical air capability in Europe and Asia.	-	Euro Mino

E FORCES
L AIRCRAFT

Mission	Primary Applicable Treaty	Strategy Supported	Other Potential Deployments
rovide close air support, ain air superiority, and rovide interdiction for NATO conflict.	NATO	To deter aggression in Europe. To ensure that we have the capability to conduct an initial conventional defense of NATO.	
Provide close air support, ain air superiority and rovide interdiction for n Asian conflict.	SEATO Bilateral Mutual Defense Treaties	To deter aggression in Asia. To ensure that we have the capability, in concert with allies, to conduct a conventional defense of Asia against a threat including the PRC.	Can be redeployed worldwide.
Provide reinforcement of tactical air capability in Europe and Asia.	-	Europe and Asia Strategies Minor Contingencies	Can reinforce NATO or Asian allies. Can also be used for minor contingencies.

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