Department of the Army Historical Summary

Fiscal Year 1976

CENTER OF MILITARY HISTORY
UNITED STATES ARMY
WASHINGTON, D.C., 1977

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Compiled

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I. Introduction

Born in war, the Army entered its third century in peace. Today's Army is far removed from the original homespun collection of citizen-soldiers with their motley assortment of weapons and equipment. Yet, despite the changes of the past two centuries, much of the spirit and many of the conditions that led to the formation of the first army live on. The faith, courage, and endurance to meet potential threats and challenges persist, even though the menace of physical invasion has long since diminished. While the face of the enemy may vary, and yesterday's ally may become tomorrow's foe, the truth remains that there is no guarantee of lasting peace.

In looking back at the record of the past two centuries, it is apparent that although the costs of maintaining military strength may be high, the costs of overcoming military weakness may be even greater. The era of the instant army may have disappeared with the passing of the minutemen, and strong forces in being have become essential if the nation is to have any hope for survival in a major confrontation. As Americans discovered during the wars in Korea and Vietnam, even limited wars make heavy and immediate demands upon the country's resources in men and materials. From past experience, one maxim should be clear—there is no substitute for readiness.

Because the United States may have to react to aggression more rapidly than ever before, the Army must be able to make a swift transition from peace to war. Its forces must be capable of carrying out commitments in Europe, of engaging in any possible small contingency elsewhere, and of still retaining a strategic reserve.

Since the end of the war in Vietnam, the Army has been reshaping and reorienting its forces and organization to carry out its mission in a changing battlefield environment. (The recent battles in the Middle East have vividly demonstrated these changes.) It has placed new emphasis upon mechanized and armored divisions with increased mobility and firepower.

With the support of the president and Congress, the Army has also sought to reach its goal of twenty-four combat-ready divisions that will dissuade any enemy from the use of force. Although much has been achieved, much remains to be done. Since the initial and probably most intense phase of a conflict will be fought with the troops and equipment on hand, both the active and reserve components of the Army must

be designed to provide early combat power and the necessary support forces to sustain that power. The lengthy periods of mobilization that the nation once enjoyed will no longer be possible, since the standby Selective Service will not be able to deliver its first recruits for training for at least three months. Thus, balanced forces, both combat and support, must be ready from the outset of hostilities.

Despite technological advances and the mechanization of wars, the soldier remains the key factor in the military equation. The inception of the all-volunteer force in early 1973 met with initial success, but reductions in recruiting funds and an increasing reluctance on the part of eligible males to enlist portends mounting difficulties in sustaining the quantity and quality of the Army. To attract and retain capable people requires consistent support of programs that make a career in the Army an attractive alternative to its civilian counterpart in challenges, opportunities for education and advancement, job security, and a decent environment to live in. Under the volunteer system, the Army must compete directly with the civilian segment for recruits. Considering the additional risks involved in a military career, the Army continues to operate at a disadvantage in this area.

Soldiers must be well equipped, armed, and trained to be effective. Since they may have to face adversaries who outnumber them and are just as well prepared, the Army cannot hope for success unless it is able to procure adequate equipment, eliminate existing shortages, modernize present systems, and maintain a dynamic research and development program. To combat aggression, the Army must have both arms and equipment on hand and a capability to provide replacements until industrial mobilization can take up the slack.

With the nation at peace and in a period of military retrenchment, the Army has planted, programed, and budgeted its requirements on an austere basis. It has tried to keep its requests at the minimum essential level and to improve its management techniques so that it can get the most from available resources. Innovations and changes in doctrine are also in progress to further these goals.

The account of the Army's stewardship that follow elaborates on the successes and failures encountered during fiscal year 1976 and the transition quarter, from 1 July to 30 September 1976. While the story, on the whole, is encouraging in many respects, there are some disturbing trends. After two hundred years many of the original problems remain and demand constant attention. Neither the nation nor the Army can afford to ignore them without unacceptable risk.

II. Operational Forces

A principal and long-standing objective of the Army is to maintain a ready force capable of swift and successful responses to crises without resort to nuclear weapons. To attain this objective, a balancing of costs and manpower resources against national strategy and commitments led the Army in fiscal year 1975 to begin increasing its force structure by three divisions. This increase would provide a structure of 24 divisions, 16 in the active Army and 8 in the National Guard. While continuing to develop its force structure this year, the Army concentrated on improving the readiness of units to perform their missions. It also stressed readiness in terms of the deployment of its forces and assistance to the forces of allied nations.

Force Structure

In raising three more divisions, the Army stayed within its authorized strength of 790,000. As an interesting comparison, the Army last supported sixteen active Army divisions in 1965 when its strength was greater by 180,000. Additional combat spaces needed, some 50,000, came in large part from reductions in the number of spaces occupied by headquarters and support troops. This tailoring resulted in an improved Army-wide combat-to-support ratio, an increase from 50 to 50 in the previous fiscal year to 53 to 47. The Army also affiliated National Guard brigades with the new divisions as a means of rounding out their organization.

The three divisions selected for activation were the 5th Infantry Division (Mechanized) and the 7th and 24th Infantry Divisions. During the previous year, the Army activated the 7th Infantry Division at Fort Ord, California, but organized only one of its brigades. The Army activated the second brigade this year and named the 41st Infantry Brigade of the Oregon National Guard as the division's roundout unit. The 1st Brigade, 5th Infantry Division (Mechanized), and the 1st Brigade, 24th Infantry Division, activated in the previous period at Fort Polk, Louisiana, and Fort Stevens, Georgia, respectively, functioned as separate brigades until September 1975 when the Army organized their parent divisions. Designated at that time as the divisions' respective roundout brigades were the 256th Infantry Brigade of the Louisiana National Guard and the 48th Infantry Brigade of the Georgia National Guard. The Army has scheduled the activation of each division's remaining brigade for next year.

As in the case of the three newly organized divisions, all other active Army divisions deployed in the United States, including Hawaii, have reserve component units affiliated for training and mobilization. The Army has given these reserve units priority in the issue of equipment to make them compatible with their parent divisions, to improve their readiness, and thus to insure their capability of early deployment with parent divisions in any mobilization.

In other structural changes, the Army activated another Lance unit, the 6th Battalion, 33d Artillery, at Fort Sill, Oklahoma. This activation raised the number of active Lance nuclear artillery battalions to 8, 2 of which were at Fort Sill and 6 in Germany. Elsewhere, the inactivation of the 1st Battalion, 73d Armor, and the activation of the 2d Battalion, 9th Infantry, within the 2d Infantry Division in Korea, occurred in the course of the Army's redistribution of assets to attain the force level of sixteen active Army divisions.

Another adjustment of the force structure involved the reorganization of all sixteen active Army Engineer construction battalions as heavy combat battalions. The change, by giving each battalion more crew-served weapons and demolition sets and adding to its armament the Dragon antitank weapons system, increased its ability to conduct combat and combat support operations, but did not reduce its capacity for performing heavy construction work.

An institutional change affecting the Corps of Engineers during the year reflected the direct role in combat operations that Engineer units have long performed. Heretofore, the Army had classed the Corps of Engineers branch as a combat support arm and a service—definitions that do not include direct participation in battle. Yet, in its classification of units, the Army had placed 80 percent of all Engineer units in Category I, which includes units whose missions involve "destruction of the enemy in support of, or assistance to, the ground gaining troops by fire or other tactical support." In recognition of the mission and past combat action of most Engineer units, the Army, on 12 September 1975, classified the Corps of Engineers as a combat arm as well as a combat support arm and a service. The combat arms, by definition, are "those branches whose officers are directly involved in the conduct of the actual fighting."

Another branch action during the year concerned the Chemical Corps. In May 1973, the Army had asked the Congress for legislative authority to discontinue the Chemical Corps. The Army planned to transfer corps functions to other branches, principally to the Ordnance Corps. No further steps could be taken over the next three years, however, because the Congress failed to act on the Army request.

Knowledge of the plan to abolish the Chemical Corps discouraged prospective officers from electing the chemical specialty. None took a commission in the corps after 1974. For the same reason, officers in the corps transferred to other branches and enlisted men avoided chemical assignments. As this loss of expertise occurred, the United States obtained evidence that the Soviet Union had achieved a superior ability to conduct chemical warfare, both offensively and defensively. Recognizing that the proposal to abolish the Chemical Corps had contributed to the Army's lesser position, the Secretary of the Army on 12 July 1976 authorized the continuance of the corps as a branch; it was, however, categorized as a combat support arm, not a service as before.

Readiness

Manpower is one of the factors considered in assessing the readiness of Army units. This year the Army succeeded in bringing the personnel strengths of all major active Army units up to the percentages of their total authorized strengths set as goals for the period. The condition of unit logistics, that is, a comparison between the amount and serviceability of equipment on hand and the quantities authorized, is another measurable factor in determining unit readiness. This year logistic readiness improved steadily; nevertheless, at year's end, some newly activated divisions lacked initial issues of several items of equipment. In April, the Army took a new approach toward advancing logistic readiness through adoption of a Command Logistic Review Team Expanded Program. This program, managed at the department level in the Directorate for Materiel Readiness, Office of the Deputy Chief of Staff for Logistics, produces an improved, vertical, bottom-to-top analysis of logistic matters from Army unit to national inventory control point levels. Through this analysis it is possible to determine trends affecting logistic readiness and the best course of future action.

Other circumstances measured or judged in determining unit readiness include training, leadership, and morale. Weighing all pertinent factors, the Army concluded that 60 percent of active Army units achieved assigned readiness objectives this year. A year ago the figure was 57 percent. All divisions except those recently activated and not yet fully organized were judged able to perform their assigned combat missions. Of these, the divisions in the United States were rated either fully or substantially ready; all divisions in Europe were rated substantially ready; and in the Pacific, the division in Hawaii and the division in Korea, with its Republic of Korea Army augmentation, were considered ready to perform their missions. (See deployment table below.)

DEPLOYMENT OF

DIVISIONS, SEPARATE BRIGADES, AND SEPARATE REGIMENTS

30 September 1976

Unit	Location
1st Infantry Division (Mechanized) (—)	Fort Riley, Kansas
2d Infantry Division	Korea
3d Infantry Division (Mechanized)	Germany
4th Infantry Division (Mechanized)	Fort Carson, Colorado
5th Infantry Division (Mechanized) (—)	Fort Polk, Louisiana
7th Infantry Division	Fort Ord, California
8th Infantry Division (Mechanized)	Germany
9th Infantry Division	Fort Lewis, Washington
24th Infantry Division (—)	Fort Stewart, Georgia
25th Infantry Division	Hawaii
82d Airborne Division	Fort Bragg, North Carolina
101st Airborne Division (Air Assault)	Fort Campbell, Kentucky
1st Armored Division	Germany
2d Armored Division	Fort Hood, Texas
3d Armored Division	Germany
1st Cavalry Division	Fort Hood, Texas
Berlin Brigade	Germany
3d Brigade, 1st Infantry Division (Mechanized)[1]	Germany
3d Brigade, 2d Armored Division (Brigade 75)	Germany
4th Brigade, 4th Infantry Division (Mechanized) (Brigade 76)	Germany
6th Cavalry Brigade (Air Combat)	Fort Hood, Texas
172d Infantry Brigade (Light)	Alaska
193d Infantry Brigade	Canal Zone
194th Armored Brigade	Fort Knox, Kentucky
197th Infantry Brigade	Fort Benning, Georgia
2d Armored Cavalry Regiment	Germany
3d Armored Cavalry Regiment	Fort Bliss, Texas
11th Armored Cavalry Regiment	Germany

[1] Officially referred to as 1st Infantry Division Forward.

As an overall assessment, the Army's operational forces at year's end were able to carry out their mission, but with limitations. The larger tasks confronting the Army were to complete its sixteen-division force, fill all equipment needs, and then hone the force to greater readiness.

Europe

In Europe, the Army directed its principal efforts toward improving the readiness of U.S. forces in conjunction with the preparations of NATO allies against the growing offensive power of the Warsaw Pact and, in particular, against its increasing ability to attack with little or no warning. These efforts included raising the number of American combat troops stationed in Europe, increasing their firepower, improving the Army's ability to reinforce them and support them logistically, and refining the ability of the diverse NATO forces to perform as a smoothly functioning team. One objective was to develop an initial conventional defense that was strong enough to force the Warsaw Pact to mobilize before attacking, which would give NATO forces some warning. Further, NATO's display of a credible reinforcement and sustaining capacity along with its inherent advantages of a superior industrial base would perhaps deter the Pact powers from attacking even though they had mobilized.

Army strength in Europe remained about 199,000. Alteration of this figure to include more combat spaces had started during the previous year under the provisions of the Nunn Amendment to the 1975 Military Appropriation Act (Public Law 93–365). The amendment obliged the Army to cut 12,414 noncombat spaces from its European strength, 6,000 of these by the end of the previous fiscal year and the remainder by 30 June 1976, and authorized an increase in combat strength by a like amount. This year the Army made the additional cuts and continued to raise its combat strength.

The Army's major move this year in increasing its combat strength in Europe involved the deployment of a reinforced brigade (Brigade 76) to Germany between March and June 1976. The headquarters and all units of the force, except for one mechanized infantry battalion from the 1st Infantry Division at Fort Riley, Kansas, and two nondivisional field artillery battalions from Fort Sill, Oklahoma, were from the 4th Brigade of the 4th Infantry Division (Mechanized), stationed at Fort Carson, Colorado. The brigade headquarters and support battalion moved to Germany in a permanent change of station (PCS) status and the remainder of the force on a temporary duty (TDY) basis. It was the intent of the Army to return the TDY units to the United States after six months, replace them with other TDY units for the next six months, and continue the rotation indefinitely. But, in May 1976, Army Chief of Staff General Fred C. Weyand decided to convert most of the force to PCS status at the time of the next rotation in October 1976. General Weyand made this decision because of an adverse effect on parent units in the United States in sustaining the rotation and because family separations caused by TDY for extended periods were damaging morale. As a result, the next replacement units were to deploy with 84 percent of their members in a PCS status; persons deploying on temporary duty were to be replaced at the end of their tours through the normal individual replacement system.

Other measures to increase Army combat strength in Europe included the deployment of the 235th Aviation Company (Attack Helicopter) from Fort Knox, Kentucky, to Germany in June 1976. Additionally, the combat strength improved as a result of the reorganization, mentioned above, of Engineer construction battalions as heavy combat units. Three of these battalions were located in Europe. A final step involved raising the manning levels of other combat units stationed in Germany.

Increasing the firepower of combat units meant, in part, improving ammunition supplies. Accordingly, the Army during the year raised ammunition stockage levels and adjusted storage locations in Europe. Studies on the subject also pointed to the need for more artillery, es-

pecially conventional artillery. In relation to this need, the Army has had under development for some time a nonnuclear warhead for the Lance missile, and the Congress has authorized its procurement for next year. Once equipped with the new warhead, the six Lance battalions in Europe will possess a valuable flexibility in their nuclear capability and their ability to contribute to a conventional war by supplementing the fire support available from cannon artillery and tactical aircraft. The Lance weapon has added advantages in that it can be used under all weather conditions and is less vulnerable to countermeasures than are other fire support weapons. The Army also decided during the year to increase the density of antitank guided missile systems in Europe.

Improving the Army's ability to reinforce and sustain the forces in Europe involved a variety of activities. One effort made, though not completed, was to fill prepositioned materiel configured to unit sets (POMCUS). This prepositioning of materiel is the concept of storing most of a unit's TOE equipment in unit sets in a potential combat theater so that only the unit's personnel and some minor equipment need be airlifted into the theater to provide rapid reinforcement.

REFORGER 76, the eighth annual strategic mobility exercise to test U.S. and NATO plans and procedures, was significantly different from previous exercises. In earlier instances, the troops of the 1st Infantry Division and support units moved to Europe by air and participated in field training exercises using prepositioned equipment. This year, in the largest and most complex exercise to date, the 101st Airborne Division (Air Assault) deployed to Europe, transporting its personnel by air and its equipment by sea. Not only did this deployment introduce the airmobile concept to the REFORGER training series but also demonstrated the ability of the United States to reinforce NATO by sea. For related reasons, the Army during the year supported Air Force and Navy efforts to increase their respective airlift and sealift capacities.

Under the plan put into force during the previous year, called Minimum Required Logistical Augmentation, Europe, the Army made further progress in developing a wartime line of communications through the Benelux countries (Belgium, the Netherlands, and Luxembourg) for U.S. forces stationed in central Europe. The original line through France had had to be given up when the French limited their participation in NATO. Also aimed at improving materiel readiness in Europe was a Modernization of Logistics (MODLOG) project begun by U.S. Army, Europe (USAREUR), in September 1975. One goal of the project is the establishment of an air line of communications next year for shipping selected repair parts (Class IX) from the New Cumberland Army Depot, Pennsylvania, the distribution depot responsible

for supporting the eastern United States and Europe. A second objective is to develop a limited general support supply base for USAREUR major subordinate commands, including the installation of the Standard Army Intermediate Level Supply Subsystem. When this objective is fully accomplished, the subordinate commands will be able to go directly to the supply base in the United States for support, and USAREUR's existing intermediate logistic structure will be dismantled.

A further purpose of the MODLOG project was to transfer certain logistic functions from USAREUR to agencies in the United States. In one such move, USAREUR transferred the operation of its ports to the Military Traffic Management Command. USAREUR also will place remote areas, which are outside the major subordinate commands, on direct support from the United States.

MODLOG has the additional goal of increasing host nation support. The United States has long relied on its European allies for logistic support, primarily for rear area requirements. This year's REFORGER exercise, for example, depended heavily on host nation support along the lines of communications. The support provided included stevedoring, medical service, equipment recovery, billeting, rations, and petroleum, oil, and lubricants. The exercise disclosed the need to expand this source of support, and during the year USAREUR opened negotiations with host nations to obtain their acceptance of additional logistic functions.

To improve the effectiveness of NATO forces working as a team, the Army progressed in interrelated areas collectively called NATO Rationalization/Standardization/Interoperability. Rationalization means the development of concepts for achieving the most efficient use of defense resources. The focal point of this effort was a Department of Defense steering group whose Army member came from the Office of the Deputy Chief of Staff for Operations and Plans. The steering group worked toward achieving common ground in doctrine, systems, and readiness among NATO forces and a NATO defense based on collective security, not uncoordinated, single-nation efforts. In a related activity, the Office of the Deputy Chief of Staff for Logistics participated with a newly formed Logistics Rationalization Group in improving mutual logistic support. Negotiations of the group with representatives of other NATO members led to improvements in resupply, joint use of storage sites, maintenance of equipment, transportation support, and logistic support from the civil sector.

Standardization means uniformity, and interoperability means compatibility in doctrine, equipment, systems, and procedures. The DOD steering group regarded standardization as a long-term goal and interoperability as a short-term goal. The Army, nevertheless, moved forward in both areas during the year. Petroleum products used by land forces

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were standardized. There was some standardization of equipment, and studies were undertaken to improve the interoperability of other equipment through use of adapters, common components, and interchangeable spare parts. Representatives of the U.S. Army Training and Doctrine Command and the German *Bundeswehr* eliminated major doctrinal differences; the Army's Field Manual 100–5 on operations and the German Army's equivalent now correspond. In four field training exercises conducted during the course of REFORGER 76, the participation of allied forces was greater than during similar exercises in the past. As a result, the exercises provided valuable lessons in both standardization and interoperability.

Facilities needed to support NATO military forces as a whole are funded through the NATO Infrastructure Program. The U.S. share of program funds is provided through Military Construction, Army, authorization and appropriation acts. The U.S. share this year, which was about 20 percent of the total funding, amounted to $107.1 million and consisted of $71 million in appropriations, $4 million in recoupments, and $32.1 million in unobligated money from earlier appropriations.

The Pacific and the Far East

In the spring of 1975, following the fall of the Republic of Vietnam and Cambodia, the Army began to participate in a program for handling Indochinese refugees. It operated a center on Guam for processing refugees for further movement to the United States and other countries (Operation New Life) and two reception centers at Fort Indiantown Gap, Pennsylvania, and Fort Chaffee, Arkansas, for handling refugees entering this country (Operation New Arrivals).

The Army closed the Guam center near the end of the previous year after processing about 112,000 refugees. It continued to operate the reception centers until December of this year. The Army handled over half of the 130,000 refugees entering the United States; the Air Force and Marine Corps processed the remainder. The refugee program involved more than 8,000 Army members and cost almost $62 million.

In a related activity, the Army helped to constitute and operate a Joint Refugee Information Clearing Office (JRICO). Initially, the purpose of this office was to assist service members who wished to sponsor or provide other resettlement aid to former armed forces members of the Republic of Vietnam and the Khmer Republic. Once in operation, the office handled a wider range of matters raised by military and associated individuals and groups seeking to help a broad cross section of the refugee population.

The joint office staff was composed of members of the respective reserve components of the Army, Marine Corps, and Air Force (the Navy

maintained a similar but separate office). The Army's Office of the Deputy Chief of Staff for Personnel acted as host for JRICO operations, providing facilities and administrative support. Established on 4 June 1975, the office functioned until the end of January 1976, by which time it had handled thousands of sponsorship cases and other requests for information and assistance.

In accordance with the earlier request of the government of Thailand, the Army completed the withdrawal of troops, equipment, and supplies from Thailand during the early part of 1976. Remaining in the country were the Joint U.S. Military Advisory Group, Thailand, and the Defense Attache Office. The U.S. troop strength there at the end of this year was 218, of which 111 were Army personnel.

In carrying forward the project of reducing U.S. presence on Okinawa, the Army in November 1975 transferred responsibility for handling excess stocks on the island from U.S. Army, Japan, to U.S. Army Materiel Development and Readiness Command. The latter command determined which items were in demand and began returning them to depots in the United States. By year's end, over $24 million worth of materiel was sent back to this country.

Army strength in Korea remained steady at approximately 33,000. In the 2d Infantry Division, however, there was sufficient transfer of support spaces to combat spaces to increase the division's combat strength significantly. In the area of logistic support for the defense of Korea, President Gerald R. Ford on 30 June 1976 signed into law an amendment to the Foreign Assistance Act of 1961 so that Defense funds could be used for the materiel support of allies. The amendment set ceilings of $93.75 million for fiscal year 1976 and the transition quarter, all of which was allocated to the Army to allow it to add ammunition to the Republic of Korea Army War Reserve for allied use in the event of hostilities.

Taking a theater-wide view, the U.S. Army in the Pacific Review Group, an ad hoc body formed in November 1975 and cochaired by operations and logistic representatives of the Army staff, assessed present and future U.S. interests in the Pacific and the Army forces and facilities required to support them. Westpac III, the designation given to the review group's enumeration of forces, bases, and war reserve materials needed during fiscal years 1978–82 to meet Army requirements in the Pacific, was approved by the Chief of Staff in May 1976.

Command and Control

The Worldwide Military Command and Control System (WWMCCS) is an integration of systems allowing communication among the National Command Authorities (the president and Secre-

tary of Defense), Joint Chiefs of Staff, commanders of unified and specified commands, and forces in the field. The C^3 (command, control, and communications) resources currently employed in the system have been introduced sporadically either as a quick response to a new requirement or to take advantage of newly available technology. A need therefore existed to integrate the WWMCCS more fully.

This year, to meet this need, the Department of Defense awarded a contract for a study to develop a master plan for the WWMCCS. Approved in June 1976, the plan called for certain of its provisions to be carried out by 1985, some of them by the Army. These included the development of Jam Resistant Secure Communications, an Alternate National Military Command Center, a European Command Combat Operations Center, and what was called Rapid Reaction Deployable C^3. By September 1976, the Army completed its plan for carrying out these provisions and as the year ended was working out the necessary funding, manpower, and scheduling.

Additionally, the Army in May 1976 took the first steps to create an Army Command and Control Master Plan covering both strategic and tactical requirements. This plan will eventually guide the development of a composite Army command and control system. It is expected that preparing the plan will involve both industry and the Army for about two and a half years. The Army intends the system to be operational by 1985.

The Army also continued to participate in the joint Ground and Amphibious Military Operations program, for which the Chief of Staff is the executive agent for the Joint Chiefs of Staff. In this effort to achieve compatibility among tactical command and control systems used in ground and amphibious operations, the work on technical design and plans for testing went forward separately in four functional areas: intelligence, amphibious operations and fire support, air operations, and operations control.

Chemical, Biological, and Nuclear Matters

Since chemical agent munitions gradually deteriorate or become obsolete for other reasons, they must eventually be discarded. Before 1969 the Army handled disposal by open pit burning, land burial, and ocean dumping. An extensive ocean dumping operation in 1969 had to be suspended, however, because of adverse public reaction. The Army then turned to the National Academy of Sciences for recommendations on disposal. Reasoning that there would continue to be strong public opposition to any movement of the hazardous materials, the Academy advised that disposal should take place where the chemical items were located and urged that, in disposing of them, the Army insure the protection of the environment.

Proceeding on that basis, the Army has begun to develop a Chemical Agent Munitions Disposal System at Tooele Army Depot, Utah, which will test the suitability of new automated equipment and processes for on-site disposal. This year the Army also began to survey a number of installations for contamination and any migration of the contaminants and to curb the problems discovered. In associated moves, the Army took steps to improve the physical security of chemical storage sites and, in the interest of conserving resources, to reduce the number of sites by consolidating stocks.

On the international scene, the United States this year, as in the past, pressed for an agreement on chemical warfare limitations in the Conference of the Committee on Disarmament. To date, however, the conference has failed to reach even preliminary agreement on the essential ingredients of a chemical warfare treaty. On the same subject, the United States also conducted bilateral discussions with the Soviet Union this year, but made no progress.

Meanwhile, given the evidence of the Soviet Union's superior ability to conduct chemical warfare, the Army took a number of measures to improve its defensive chemical warfare, particularly in Europe. These included the issue of individual and unit protective items of equipment to USAREUR forces and emphasis on obtaining improved chemical agent detectors, alarms, and training devices. Approved organizational changes called for the eventual establishment of a chemical defense company in each division. In addition, chemical warfare training received command emphasis throughout the Army.

In nuclear matters, the Army this year gave attention to achieving more centralized management of nuclear activities, adjusting its tactical nuclear weapons stockpile, and refining nuclear weapons doctrine. In the management area, the Chief of Staff established as a focal point for nuclear as well as chemical matters an office in the Army staff's Directorate of Strategy Plans and Policy. Additionally, there was a decision to establish, as a field operating agency under the Deputy Chief of Staff for Operations and Plans, a new Army Nuclear Agency at Fort Belvoir, Virginia. The new agency will represent a consolidation of the existing Army Nuclear Agency, Fort Bliss, Texas, with the Army Nuclear and Chemical Surety Group at Fort Belvoir.

The stockpile of tactical nuclear weapons was the subject of a seven-month study, the Battlefield Theater Nuclear Force Mix Analysis. This analysis provided a basis for requirements and force levels involving new 8-inch and 155-mm. nuclear projectiles and an improved nuclear warhead for the Lance missile. Doctrinal studies undertaken during the year, all aimed at improving the war-fighting and deterrent effect of the tactical nuclear weapons stockpile, dealt with the issues of sur-

vivability; command, control, and communications; security; and employment planning.

Security Assistance

Since World War II, the United States has helped friendly nations improve their ability to defend themselves by providing them with defense articles, services, and training. Originally, this security assistance was mostly grant aid for which the United States received no reimbursement. The predominant type of security assistance has since become foreign military sales whereby foreign governments purchase their defense needs at the rate of about $10 billion annually. Not only the composition but also the size of security assistance has changed significantly over the years.

As the U.S. presence continued to dwindle in the Pacific area this year, the major security assistance development affecting that region was the amendment of the Foreign Assistance Act allowing the use of Defense funds to stockpile materiel for allies. As mentioned above, this year's expenditure was allocated to adding ammunition to the allied war reserve stocks in Korea.

In Europe, security assistance was a blend of grant aid and foreign military sales, with requests involving the latter, in some instances exceeding the ability of the United States to respond. In the Middle East there was rapid growth in assistance activity as Saudi Arabia, Iran, Kuwait, Jordan, and Israel continued military modernization programs and accelerated the acquisition of sophisticated weapons systems. Security assistance for African countries continued to be hampered by the ceiling on foreign military sales established by Congress; therefore, no significant sales activity occurred this year except with those countries with previously established programs.

Much of the materiel furnished to other nations under the security assistance program has come from Army stocks. This year, however, there was a marked reduction of such withdrawals and diversions of Army goods since there were no major international crises requiring them. Nevertheless, the Army, with a view toward maintaining and improving its own readiness, took measures to conserve its materiel inventory and production. One step, taken early in 1976, was to stop all withdrawals and diversions for the following eighteen months. Because of critical shortages and a need to protect advanced technology, the Army also recommended to the Department of Defense that certain equipment and munitions not be sold to foreign governments.

These steps to protect its materiel readiness aside, the Army fully supported security assistance in the realization that strengthening allies, in effect, amounted to economies in U.S. military forces and savings to

American taxpayers. Further, assisting other nations to become militarily strong enough to maintain stable regional balances of power was of direct benefit to the United States.

Military Support to Civilian Authorities

The Army in performing its statutory protective functions responded to 2,166 requests for assistance from the Secret Service, a figure substantially higher than the 791 similar requests received last year. The increase reflected the more numerous protective responsibilities of the Secret Service during a presidential election year.

The Army support requested included vehicles and drivers, helicopters and crews, and medical service. The larger number of requests were for communications and for people experienced in explosive ordnance disposal. The latter expended almost 605,000 man-hours during the year on missions to protect presidential candidates, leading governmental officials, and visiting foreign dignitaries.

III. Force Development

The U.S. Army is that combination of active and reserve forces with civilian support elements designed to meet the needs of national security. Accordingly, the Army in 1974 began planning for sixteen active divisions which, given adequate resources, will be operational during fiscal year 1978.

Force Structure

Military and civilian manning, active units and reserve components, combat forces and support echelons, nuclear and conventional capabilities, and overseas and CONUS deployments—these are the factors that together are referred to as force structure. In 1973 Chief of Staff Creighton W. Abrams recommended major changes in Army force structure, primarily because of the continuing Soviet threat and the imminence of nuclear parity. The core of these changes was the call for sixteen active divisions, an increase of three above existing force levels.

To implement a sixteen-division force, the Army decided to convert 50,000 support spaces to combat spaces, rather than seek an increase in manpower. Limitations on personnel, however, meant that the three new divisions would have only two active brigades. The third brigade for each division would come from the National Guard, an approach that would help improve reserve component readiness. The cutback in active support forces also increased reliance on the reserve components for the bulk of support necessary to sustain the Army in combat. Four divisions in the sixteen-division force now have roundout brigades. In fiscal year 1976 the final two infantry divisions were activated: the 24th at Fort Stewart, Georgia, and the 5th at Fort Polk, Louisiana.

There were a number of changes in the Planning, Programing, and Budgeting System during the fiscal year. The Army's Program Objective Memorandum was submitted for fiscal years 1978 through 1982, with emphasis on planning for 1978. The memorandum is the single document which presents total force programs, including manpower and materiel costs and supporting rationale. It was submitted to the Secretary of Defense as the Army's recommendation for resource requirements within the guidelines published in the Defense Planning and Programing Guidance Memorandum (PPGM). The Program Objective Memorandum emphasized operational readiness, the ability of forces to deploy, the modernization of weapons systems, and improved use of manpower. Specific programs recommended sought to increase combat capability by

converting units, realigning headquarters, and reducing support troops. The Program Objective Memorandum also called for increased reliance on the reserve components and the development of heavy and light corps that could meet differing battlefield requirements.

Two major analyses were conducted by the Army staff on the past year's Program Objective Memorandum. The first, Army Readiness Analysis (OMNIBUS 76), assessed the operational readiness of the Army. The study concerned three areas: the capability of the Army to deploy and sustain its combat forces, the performance implications of deficiencies in combat and support units, and possible changes in resource allocation that could improve force performance. The second analysis, Total Army Analysis, defined the minimum essential force structure for the active Army, the Army Reserve, and the National Guard. Based on these two analyses, the following year's program for fiscal years 1979 through 1983 can be constructed and additional improvements in the Army's force structure recommended.

A third related study was also conducted. Called the Conceptual Design for the Army in the Field (CONAF–V), it evaluated conceptual force designs in a total Army context within imposed budgetary constraints. Besides providing a basis for developing new force designs, CONAF–V reinforced the belief that enough early combat power could be provided to support the new NATO strategy of forward defense.

During the report year the Army continued the Support Activities Staffing Review as part of its emphasis on a balanced support structure with minimum staffing and grades for enlisted and civilian positions. Approximately 500 civilian positions were eliminated, 800 others were approved for downgrading, and the documentation of enlisted positions for elimination or downgrading was nearly completed by the close of the fiscal year. Civilian reductions and downgrading are continuing.

The Army's Authorization Documents System (TAADS) established organizational, personnel, and equipment requirements to support Army units in the performance of their assigned missions. By September 1976 Army headquarters had received, primarily through its Automatic Digital Network, 1,106 modification tables of organization and equipment and tables of distribution and allowances for unique organizations. This figure was nearly 90 percent of the 1,331 required for the end of fiscal year 1977. Already 30 percent of the TAADS documentation needed for fiscal year 1978 is on file at Army headquarters.

A similar program for application at the installation level, Installation—The Army Authorization Document Systems (ITAADS), is being field tested and planned for extension to forty-five sites. The objective is to provide a more accurate and rapid system for documenting the authorized strength in manpower and equipment at installations.

Concepts and Doctrine

In March 1976 the Deputy Chief of Staff for Operations and Plans asked the U.S. Army Strategic Studies Institute to write a comprehensive account of the Army's roles and missions for publication. In September the Institute forwarded a draft, entitled "The Army: Roles and Principles," and recommended that it be published as a field manual. Besides its coverage of roles and missions, the manual discusses principles for the employment of Army forces and the extent of the Army's operational capabilities. The manual has been reviewed by the Army staff and is being prepared for publication next year.

The Army continued to develop its goals and objectives. The goals had to be definitive in order to assure coordinated effort, yet broad enough to avoid interference in command objectives. They were to provide a basis for measuring progress. In fiscal year 1975, the Army published a broad set of goals designed to improve the quality of its manpower, the use of its resources, and its preparations for the future. From those basic goals, the Army in fiscal year 1976 developed several objectives. One manpower objective is to determine how to build up adequate forces quickly after mobilization. Another is to continue to decentralize training and to emphasize performance standards and combat arms training. A personnel objective is to adhere more closely to prescribed tour lengths and increase time on station.

Doctrine for electronic combat received considerable attention this past year. Electronic warfare (EW) includes signals interception, identification, location, and jamming, and the deception of enemy command, control, intelligence, and weapons systems. Since electronic warfare is a very complex field and involves many elements of the Army, an Electronic Warfare Master Plan (EWMP) was prepared during the report year. It specifies EW objectives, defines policy, and identifies tasks that must be performed to achieve the position necessary for effective combat operations. Through this plan the Army monitors its major commands. A program to complement the Electronic Warfare Master Plan was started to improve Army plans, programs, and training criteria in electronic warfare. An important study was also conducted with the Air Force on joint EW operations.

The 1973 Arab-Israeli conflict underscored the importance of accumulating accurate information. Collecting electronic battlefield information through the interception of electromagnetic emissions is called signal intelligence electronic warfare. The Army has recognized that its equipment has not kept pace technologically with Soviet communications and other electronic equipment found on the battlefield. U.S. equipment is manually operated and slow. Accordingly the Army has been conducting a comprehensive program to develop equipment capable of support-

ing commanders at the division and corps level. There were budget requests this year for the development and purchase of hardware such as sound ranging systems and counterbattery radar.

On 3 May 1976 the Vice Chief of Staff approved a new doctrine for the use of counterbattery fire. Since World War I, counterbattery fire had been the traditional mission of artillery at the corps level, but it will now be transferred to the division and a target acquisition battery will be activated in each division. New tables of organization and equipment and field manuals reflecting the changes have been published. Three high-priority divisions of the U.S. Army Forces Command received target acquisition batteries on 21 June 1976, and other divisions will receive them over the next two years.

Ballistic Missile Defense

The antiballistic missile deployment at the Stanley R. Mickelson Safeguard Complex, Grand Forks, North Dakota, became fully operational on 1 October 1975, meeting to the day an objective set four years earlier. In February 1976, based upon an earlier recommendation by the Secretary of Defense to reduce the scope of Safeguard operations, Congress voted to discontinue the deployment of missiles at Grand Forks, but to retain the perimeter acquisition radar. All missiles were removed by the end of the fiscal year, and the perimeter acquisition radar was modified to provide expanded early warning and attack assessment.

Notwithstanding the discontinuance of Safeguard deployment, the Secretary of Defense directed the Army to conduct a rigorous research and development effort, within the provisions of the Antiballistic Missile Treaty, that would preserve U.S. options to develop and deploy a ballistic missile defense (BMD) system and preclude technological surprise by the Soviets.

The BMD research and development activity is centered in two interrelated programs—advanced technology and systems technology. The Advanced Technology Program is oriented to advance the state of the art of BMD components, improve the understanding of BMD phenomenology, and investigate the feasibility of new defensive concepts and technologies. Major research efforts are conducted in the areas of interceptor missiles, radar and optical sensors, data processing, and reentry physics. The Systems Technology Program deals with the development and deployment of BMD systems. These systems are kept current by incorporating the gains made through the Advanced Technology Program. The Kwajalein Missile Range, which is under the BMD Program Manager, provides the technical facilities and instruments for full-scale testing of BMD systems and components; it is also

used extensively by the other services for testing strategic offensive systems.

Training and Schooling

The Army has made the commitment to provide women an equal opportunity to participate in the nation's defense, and in the past decade it has made much progress in expanding the number of roles open to them. Although they will not be assigned to units whose primary mission is combat or direct combat support, enlisted women are now serving in 371 (91 percent) of the military occupational specialties (MOS's); the warrant officer program has also been opened to them. In May 1976, women received commissions for the first time through the Army Reserve Officers' Training Corps (ROTC). As of 30 September women were enrolled in 280 of the 285 higher education institutions that offer Army ROTC. Enrollment data is shown below:

School Year	Number of Women	Percent of ROTC Enrollment
1972–1973	212	1
1973–1974	3,098	9
1974–1975	6,354	16
1975–1976	9,325	19

With the phase-out of the Women's Army Corps Direct Commission Program, ROTC will become the major source of women officers by fiscal year 1978.

In addition to these programs, the United States Military Academy was opened to women, and 119 were admitted in July 1976 for graduation with the class of 1980. Male and female cadets receive common training, except for a few essential adjustments to accommodate physiological differences. The Deputy Chief of Staff for Personnel has commissioned a special study, Project Athena, which will examine the impact of coeducation on West Point and on the women themselves.

While the Army was smoothly integrating women into its training cycle, it developed a new management tool to determine, forecast, and train the personnel for the all-volunteer Army. The Army Training Requirements and Resources System was the result. The automation provided by the system allowed the Department of the Army and the Training and Doctrine Command to cope with seasonal fluctuations and to integrate training management. Later efforts will bring the reserve components into the system so that their requirements can be better determined.

To save travel expenses associated with the transfer of basic combat training (BCT) graduates to their advanced individual training (AIT) locations and to reduce training costs, Congress requested that the Army test the one station unit training (OSUT) concept. One station

unit training combines both basic combat and advanced individual training in one location and uses the same training cadre for both programs. The Training and Doctrine Command conducted the study using 17,000 trainees at six locations. The results showed that OSUT programs produced qualified graduates more quickly than separate basic combat and advanced individual training. They also showed that trainee attitudes and morale were at least as high as those in separate BCT and AIT units. The Army expects that by fiscal year 1979 less than 20 percent of its trainees will have to move to other stations to continue training. By contrast, in 1972, 75 percent of the recruits received basic combat and advanced individual training at separate locations.

The Army continued to develop individual training programs for each specialty from advanced individual training through senior enlisted service in its Noncommissioned Officer Education System (NCOES). The system is an integral part of the Enlisted Personnel Management System (EPMS) and prepares soldiers to assume duty positions at higher skill levels. During the fiscal year, programs were started at the primary and basic training levels and implementation will continue throughout fiscal year 1977. Training was also fully established at both the advanced and senior levels of the Noncommissioned Officer Education System. The general NCOES structure is shown below:

Soldiers in Grade	NCOES Level of Training Available	EPMS Trains to Skill Level	Trains to Grade Level Duty Position
E-4	Primary	2	E-5
E-5	Basic	3	E-6
E-6	Advanced	4	E-7
E-7/E-8	Senior	5	E-8/E-9

In fiscal year 1976 the Vice Chief of Staff approved the recommendations contained in the Army Linguist Personnel Study. The study recommended that all intelligence officers possess at least an elementary proficiency in a foreign language and that language training programs be developed by the end of fiscal year 1977. During fiscal year 1976 the commander in chief of U.S. Army, Europe, requested and DA approved a special six-week "Gateway to German" language program for future USAREUR brigade and battalion commanders.

Acting upon the request of the Assistant Chief of Staff, Intelligence, the Army sought and got approval from the Department of Defense and the State Department to institute Opposing Force programs. Under the programs, soldiers will be trained to use Soviet weapons and tactics so that they can act as a realistic enemy during maneuvers.

On 3 and 4 March 1976 the Department of Electrical Engineering at the U.S. Military Academy issued a graded home study project to 823 cadets enrolled in its standard course, EE304. The study project was

turned in by each cadet two weeks later. During the grading of papers, a notation by a cadet admitting unauthorized collaboration led to the discovery that three papers had unusual similarities; however, later investigations indicated that a number of cadets were involved. The very nature of the problem and the esteem with which the academy is held by the nation brought both press and congressional scrutiny.

On 21 June the Secretary of the Army, the superintendent of the academy, and the commandant of cadets appeared for a hearing before the Senate Armed Services Subcommittee on Manpower and Personnel; at that time the number of cadets implicated in the EE304 situation was 171. In August the Secretary of the Army and the superintendent appeared against before the subcommittee; by then 202 EE304 cases had been referred to the superintendent. At the hearing the Secretary of the Army announced that he was appointing a special advisory panel to assess the situation and its underlying causes. Mr. Frank Borman, president and chief executive officer of Eastern Airlines, was appointed chairman of the panel. The secretary also stated that cadets who violated the honor code in respect to EE304 would be separated from the academy but allowed to apply for readmission in the spring of 1977. His action allowed cadets, who at that time had not been implicated, a ten-day grace period to admit unauthorized collaboration and be eligible to apply for readmission. The two-year active Army service requirement for dismissed cadets was waived. Finally, as a matter of equity, the secretary permitted all honor cases which arose during the 1975–76 academic year to be reviewed upon request.

Army Study Program

Based on guidance issued by the Chief of Staff and Secretary of the Army, the 1976 Army Study Program was published in September 1975 with 459 individual studies identified as matters of high priority to the Army. The study areas were within the categories of science and technology, manpower and personnel, concepts and plans, operations and force structure, logistics, and management.

During the year Department of the Army Pamphlet 5–5 and Army Regulation 5–5 (revised) were published in response to DOD Directive 5010.22, The Management and Conduct of Studies and Analyses. This directive was the result of the Ad Hoc DOD Audit of Study and Analysis, in which the Army participated. This new directive will help to improve study management and interservice coordination.

IV. Intelligence and Communications

In a sense, intelligence activities are the eyes and ears of the Army, just as communications are its voice. Together they enable the Army staffs to gather, evaluate, and disseminate the information that the policy makers require to draw up strategic plans and the field commanders need to carry them out. In addition, good communications permit Army leaders at all echelons to exercise command and control over their forces and to receive the timely support necessary to perform their missions.

Intelligence

As in past years, the intelligence community continued to undergo changes in its organization as part of the never-ending effort to improve efficiency and lower costs, both in funds and manpower. While the elimination of waste and duplication are fixed goals in every attempt to reorganize elements of the Army, the prime objective of the current year was the improvement of intelligence support provided to tactical commanders.

Many of the actions taken during the fifteen months covered in this report emerged from a study begun in late 1974. Under the chairmanship of Maj. Gen. James J. Ursano, director of Management in the Chief of Staff's Office, the study group completed a thorough investigation of intelligence activities and presented its findings to General Weyand the following August. Since a number of the recommendations contained in this Intelligence Organization and Stationing Study had far-reaching implications, the Chief of Staff chose to consider them individually over the next eight months.

One of the first to be approved in September was the assignment of Military Intelligence, Army Security Agency, and Special Security Office tactical organizations to integrated units controlled by field commanders. The concept called for the creation of Combat Electronic Warfare Intelligence (CEWI) battalions at the division level and CEWI groups at the corps level. The new consolidated units were expected to be more responsive to the field commanders, easier to command and control, and able to provide concentrated collection, production, and dissemination of intelligence by having access to other defense and civilian intelligence sources. While strengthening intelligence support of electronic warfare operations, these units should also contribute to unit readiness

and reduce the work of other organizations called upon to furnish them with administrative and logistic support.

To prepare for the transition, the U.S. Army Training and Doctrine Command developed organizational and operational concepts, as well as test tables of organization and equipment, while the Army Security Agency made plans to incorporate Special Security Office resources into its own tactical units. These units would then be transferred in place to the U.S. Army Forces Command, U.S. Army, Europe, and Eighth U.S. Army and eventually assigned to tactical commands. In the meantime, the Army completed plans for testing the concepts developed before the new tactical organizations were activated.

Since many men and women assigned to intelligence work did not operate at the tactical level, General Weyand decided in April that they should be integrated into a new major command to be known as the U.S. Army Intelligence and Security Command, which would be established on 1 January 1977. He directed that the commands and units providing strategic or general intelligence support to the Army, such as the Army Security Agency, the Army Intelligence Agency, the nontactical units of U.S. Army, Europe, U.S. Army Forces Command, Eighth U.S. Army, and five field operating agencies of the Assistant Chief of Staff for Intelligence, be included in the new command.

Acting on other recommendations set forth by the Ursano study group, the Chief of Staff agreed in late October to transfer the Army Security Agency Combat Developments Activity at Arlington Hall Station, Virginia, and the Army Security Agency Training Center and School at Fort Devens, Massachusetts, to the Training and Doctrine Command. The transfers took place about a year later on 1 October 1976. Eventually, the Fort Devens activity is expected to be merged with the Army Intelligence Center and School at Fort Huachuca, Arizona; the future site of the consolidated activity has not yet been selected.

In other functional transfers, General Weyand approved the movement of the Army Security Agency's Material Support Command to the U.S. Army Development and Readiness Command in February 1977. All of the Army Security Agency's nontactical communications operations, maintenance, and management were to be handed over to the Army Communications Command on 1 October 1977.

Congressional preference that justification of all budget requests associated with intelligence support to tactical commanders be presented in one package led to the transfer of another function from the Assistant Chief of Staff for Intelligence (ACSI) to the Deputy Chief of Staff for Operations and Plans (DCSOPS). The Intelligence Related Activities, as they were called, included responses to operational commands for swift and sensitive information on foreign entities, the answering of re-

quests from other members of the national intelligence community, the training of intelligence personnel, the provision of reserve intelligence forces, and research for and development of intelligence and related capabilities. Although ACSI prepared the 1976 submission book for Congress, the planned relationship of intelligence resources to operating forces caused the Chief of Staff to shift the responsibility to DCSOPS for future years.

In an internal reorganization, the Office of Cryptology merged with the Tactical Strategic Division, Directorate of Intelligence, to form a new Directorate of Tactical Strategic Intelligence. The consolidation brings the management of intelligence systems concepts, doctrine, organization, readiness, and training together with the management of photo and signal intelligence, the linking of national and tactical intelligence, and signal security. Responsibility for intelligence and security matters involving people rather than equipment remained with the Directorate of Intelligence Operations.

In addition to the organizational changes initiated to improve intelligence support to the tactical forces, the Army continued to push ahead on the program to provide intelligence analysts at all levels with easier access to their own and other intelligence data bases. Under Project ASSIST (Army System for Standard Intelligence Support Terminals), which began in 1973, the Army has sought to modernize and standardize automatic data processing hardware and software. The Army will not only standardize equipment and eliminate incompatible or obsolete items, but will also improve its early warning system and permit broader use of available intelligence data at all command levels. As an important step toward the achievement of this goal, the AN/GYQ–21(V) minicomputer has been accepted as the standard link to the intelligence data bank. Several of the minicomputers are already in operation in Army or Army-supported activities in the United States and Europe. The first phase of the ASSIST system underwent successful tests in January 1976, and these led to the installation of software components at facilities under the control of the Training and Doctrine Command's Combined Arms and Test Activity, U.S. Army, Europe, U.S. European Command, U.S. Army Forces Command's Intelligence Group, and the Assistant Chief of Staff for Intelligence in Washington. As more of the minicomputers become available in the coming year, they will be placed in the Foreign Science Technology Center, the Missile Intelligence Center, and the Army Operations Center in the Pentagon.

In line with the trend of recent years of lessening the role of Army intelligence agencies in matters dealing with American citizens who are not involved in the security of the Army, the Department of Defense instructed the Army in August 1976 to pursue the objective of centralizing the Army's personnel security adjudication program outside the U.S.

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Army Intelligence Agency. Accordingly, the Army decided in October 1976 to establish a Central Personnel Security Clearance Facility under the Deputy Chief of Staff for Personnel; the Military Personnel Center will be the action agency. The result of the transfer will be to concentrate for the first time all military and civilian personnel security clearance operations at one location and to insure that uniform criteria for granting or denying security clearances will be applied to all individuals.

The Army also acted to carry out the instructions contained in Executive Order 11905, published in February 1976, which covered foreign intelligence activities. While a new regulation to implement Executive Order 11905 restrictions and oversight procedures within the Army was being prepared, interim guidance on the restrictions on electronic monitoring, physical surveillance, and collection of information on U.S. citizens went out to the field in June 1976. The Army, in addition, established channels for quickly reporting instances of activities that might be questioned as being either illegal or improper.

Thus, the main thrust of developments in the intelligence field has been continued decentralization, increased support to tactical units, improvements in the dissemination of intelligence data, and further restrictions upon intelligence activities affecting U.S. citizens. This pattern is likely to be sustained in the years ahead.

Communications

Basic to an adequate intelligence organization is the presence of a first-class communications network. With the proliferation and sophistication of communications equipment and systems after World War II, the field entered a state of constant flux. Improvements and major breakthroughs in technology, added to the increasing automation of equipment, have followed one another with such rapidity that new items are often obsolete when they enter the Army inventory, and there is no indication that this trend is slackening. The evolution—or revolution—went on during the past year, as the Army attempted to stay in the vanguard of the relentless communications advance.

The range of activities reached from the satellites in the sky to the infantrymen in the field, but the objectives were essentially the same—to bolster the combat readiness of the Army and to develop secure and efficient channels of communications to foster better command, control, and support of its operations.

On the ground, the Army Tactical Communications Systems (ATACS) provide the field army with multichannel communications. The systems cover voice and data transmission circuits, along with all ancillary equipment. Since 1970 the Army has developed a series of plans that attempted, given the fast-moving nature of the state of the art,

to establish reasonable relationships between the equipment currently in use and that required for the future.

For the 1976–91 period, the Army conducted an Integrated Tactical Communications Systems (INTACS) study that was approved by the Chief of Staff in February 1976. The plan serves as a framework for the transition and provides a flexible and cost effective method for developing the required organization, doctrine, and equipment to support the systems that will emerge.

What lies ahead, in essence, is a continued shift to an all-digital system. Some initial steps to carry out the master plan are already under way. In August 1976, the Army awarded contracts for developing the AN/UGC–74 teletypewriter, which includes a microprocessor; this equipment will become part of the modular record traffic terminal now scheduled for development under the Joint Tactical Communications (TRI–TAC) Program. The Army also delivered fifteen analog automatic circuit switches, the AN/TTC–38, to Europe and prepared in the late summer of 1976 to send along the AN/TSQ–84 technical control to support the switch.

As an active participant in the TRI–TAC Program, the Army has responsibility for developing five major items to replace present equipment—the AN/TTC–39 automatic switch, a family of digital group multiplexors, a superhigh frequency satellite vehicle that would allow a satellite channel to be used on a time-shared basis, mobile subscribed equipment, and equipment to promote the compatibility of radio nets. Problems arose with the AN/TTC–39 switch because the contractor fell behind schedule and the estimated cost to complete its development increased appreciably. It appears that this switch will not be delivered to the field before the summer of 1982.

In the tactical satellite field, the Department of Defense authorized the Army in early 1974 to develop and procure new equipment. The base-line program, as it is called, consisted of 99 superhigh frequency (SHF) multichannel terminals, 307 ultrahigh frequency (UHF) single channel terminals, and 4 satellite communication control terminals. When the Integrated Tactical Communications Systems study took up the matter in 1975–76, the base-line objectives for the future underwent some changes. Although the types of terminals remained the same, the number of SHF terminals rose to 252 and the UHF total climbed to 1,242.

After developmental and operational testing of the SHF multichannel terminals at Fort Lewis, Washington, in 1975, the Army signed a contract with the Radio Corporation of America in June 1976 for a low-rate production of nineteen terminals. Earlier in January, it had procured and delivered twenty-one UHF single channel terminals to

Europe where they provided interim command and control capabilities and helped in the testing and developing of future equipment design and system concepts.

In a related action, the Joint Chiefs of Staff (JCS) approved in September 1976 the Army's future SHF and UHF satellite channel requirements. These will be taken into consideration as additional military satellite communications systems are designed and put into operation.

To provide the Joint Task Force commander with adequate general purpose communications support that can be used by all services within his theater, the Joint Chiefs of Staff approved a Joint Multichannel Trunking and Switching System. The Army had received $15.8 million to begin programming for the procurement of equipment for one phase of the program beginning in fiscal year 1978. As requirements from the four services came in, a model for the communications resources for this phase evolved. This model, in turn, permitted the development of a proposed force structure. Although the determination of requirements is still in process, eventually a signal battalion under JCS control should be activated, probably in fiscal year 1980, to operate and service this system. Other phases of the program await the submission of requirements from the joint commanders in the field.

To improve tactical communications among units, the Army plans to replace the FM vehicular manpack and aircraft radios with a new family of VHF–FM radios. The latter will be lighter, more reliable, and have a sophisticated antijamming capability. The Secretary of Defense approved the Army's program for developing the new radios in March 1976, and a project manager was appointed in May. Requests for bids from industry should go out early in the coming year, with the radios scheduled to enter the Army inventory in the mid-1980's.

The U.S. Army Communications Command has had the responsibility for nontactical air traffic control since 1974. It has embarked upon a comprehensive program of replacing over-age towers, installing instrument landing systems, and modernizing present equipment. During the next five years, nineteen towers will be replaced; two are scheduled for the coming year and three more in fiscal year 1978.

On the domestic front, the Army Base Information Transfer System (ARBITS), which began in 1973, sought to develop and procure integrated broadband, multimode communications and electronics systems that would handle the comprehensive information processing and transfer requirements of Army installations. The MITRE Corporation of Bedford, Massachusetts, conducted a feasibility study, then followed it up with a system definition study and a subsystem project plan. The company concluded that significant savings could be made under the ARBITS

system. Another study, conducted by the Army Comptroller in 1975–76, compared the estimated costs, benefits, and risks involved in establishing such a system with the actual costs and performances of the base communications at Fort Bliss and two other installations. Completed in June, the Comptroller study concluded that the break-even point would occur in 4.3 years if the system were put into operation at fifty installations. After this point was reached, the potential net savings annually at each installation would be about $10 million. Although the Department of Defense had indicated in December that it would use this study to determine whether to establish a triservice program, with either the Army or the Air Force being given primary responsibility, no decision ensued.

In September 1976, however, the U.S. Army Tri-Service Medical Information Systems Agency at the Walter Reed Army Medical Center in Washington recommended to The Surgeon General that a coaxial cable communications network be designed and tested for the new center under construction. This test would cost far less than a full-scale test at an installation such as Fort Bliss. The prospects for approval of this proposal appear good.

To provide assistance to major commands and data processing installations with problems in telecommunications support for automatic data processing systems, the Computer Systems Support and Evaluation Agency in Washington established a Telecommunications Support Center. The center provides assistance to Army organizations in planning, developing, and drawing up specifications for such communications equipment, as well as expert advice on the solution of problems which arise in this technical area.

One problem that has been constant in military communications from ancient times to the present is the matter of security. In its biennial report in 1976 to the U.S. Communications Security Board, the Army indicated particular concern about communications security at the unit level, where the greatest general defect continued to be the failure to use proper authentication procedures during radio telephone conversations. This situation stemmed from poor radio net control procedures and from not using available security aids fully. The Army reported significant improvements as a result of updating regulations and training materials used to indoctrinate troops during training and the assessment of penalties for violations—a technique that appeared to be effective in strengthening communications discipline. Reserve and National Guard units were not overlooked: sixty-three units underwent surveys that uncovered inadequacies in training and in the use of communications security equipment.

Additionally, the goal of providing tactical secure voice equipment for all radio nets to minimize communications security violations has

not been achieved. To meet the national objective of total voice encryption, and thus better communications security, efforts are continuing to secure the needed equipment and to develop the automated Communications Electronics Coordinating Instruction (CECI).

Deficiencies also cropped up in another related area. For some time, the nontactical Automatic Secure Voice Communications network (AUTOSEVOCOM) has enabled users to discuss classified or sensitive information over the telephone. Difficulties with speech intelligibility, voice recognition, the holding of telephone conferences, speedy service, and simple calling procedures led Defense officials to approve the development of an improved system—AUTOSEVOCOM II—and to designate the Army as the agency with primary responsibility. AUTOSEVOCOM II will incorporate technological advances and furnish higher quality communications for the several thousand subscribers who are expected to use it when it is put into operation during 1980–85. The U.S. Army Communications Command will act as program manager for AUTOSEVOCOM II, and its U.S. Army Communications Systems Agency will serve as project manager.

The same two organizations will have similar responsibilities for improving telephone systems in Europe. Since the three general-purpose telephone networks presently in use have obsolete equipment, the Defense Communications Agency devised a plan to combine them and to install modern equipment. The new equipment may be leased or government-owned and operated; similarly, transmission facilities would be either government-owned or, if more economical, leased. When Defense officials approved the plan in mid-1976, the Defense Communications Agency became the program manager and the Army received primary responsibility for carrying out the gradual improvement of European telephone facilities during the years 1977–84.

The European system was not the only one that was in need of overhauling. Communications among the members of the Central Treaty Organization were also deficient. After the Army conducted a survey of this military communications system, it developed a plan for modernizing it during upcoming years.

In several instances, nations in the Middle East have requested American assistance in bolstering their communications. In January 1976, Defense officials instructed the Army to develop a communications plan for Saudi Arabia which would include a system design and an operational concept acceptable to both governments. The U.S. Army Communications Command took on responsibility for working up the plan. Included were Defense support for an Automatic Digital Network (AUTODIN) capability, a connection to its Automatic Voice Network (AUTOVON), and data circuits linking terminal equipment used by

Defense organizations in Saudi Arabia to terminals in the United States. Saudi Arabians would be trained to manage and maintain the system, and their government would assume the costs under the Foreign Military Sales program. In August the Army Communications Command completed the plan, and it was quickly approved. With the satellite communications that would be necessary to complete the system, the cost of the program was expected to be about $469 million.

To support logistics transactions, the United States provided Automatic Digital Network service to Iran in return primarily for the use of an Iranian leased satellite circuit between the two nations and payment of $120,000 per year. When not engaged in logistics traffic, the circuit supports U.S. requirements.

In mid-1976, the Department of Defense directed the Army to determine the best method for providing the Jordanian armed forces with additional communications support. One means to be considered was the feasibility of installing an AUTODIN terminal at Amman that would be operated and maintained by the Army, but funded by Jordan. Planning for this support is in progress.

With all nations, from the newly emerging to the established powers, expanding their communications facilities, there is a possibility that the electromagnetic spectrum used to transmit radio signals will become so crowded that excessive interference will result. Although the International Telecommunications Union, which regulates the use of the spectrum, will not hold a major conference on this subject until 1979, a Low Frequency/Medium Frequency Conference in 1975 voted to realign the AM broadcast frequency bands in Europe and Asia. Almost all AM stations in these areas will have to change their frequencies by 23 November 1978. Since forty-four of the forty-eight Army-operated transmitters of the American Forces Radio and Television Service will be affected, the Army has developed plans and proposed funding for converting these stations to the new frequencies without interrupting service to the American troops stationed overseas.

The critical General World Administrative Radio Conference will be held in Geneva, Switzerland, in 1979. One of the primary tasks will be to revise the international regulations that govern the use of the radio spectrum for the rest of the twentieth century. Since the Army depends heavily upon electromagnetic emitters for both long- and short-range communications, it will spend considerable time and effort in preparing for this meeting.

Because a number of the functions related to spectrum management have been delegated to major commands, the Army decided to set up a Spectrum Management Steering Committee, under the Deputy Chief of Staff for Operations and Plans, in September 1975. The committee

provides guidance and coordinates spectrum management activities throughout the service. One of its first tasks was to develop a plan to compile known and projected requirements for Army equipment using the spectrum and to prepare an Army position on changes in the current regulations of the International Telecommunications Union. In addition to preparing for the 1979 conference, the committee sought firm information on the funds being spent on spectrum management and began to develop requirements for personnel with spectrum management skills.

Gauging telecommunications needs for the next quarter century has been especially challenging for the Army, since it involved not only keeping pace with technology and increased foreign demands for additional space on the spectrum but also analyzing the effects of introducing major systems into the environment. The growing number of electromagnetic emitters on the battlefield added considerably to the difficulty of devising systems that provide command and control and, at the same time, are electromagnetically compatible with the operational environment. Achieving compatibility with the equipment used by other services and allies was another facet of the same problem. And, as highly mobile satellite terminals come into use in the 1980's, the Army will also have to solve the question of how to coordinate frequency assignments, since the finite nature of the spectrum indicates that there will have to be some sharing of the terminals by units on the ground.

In retrospect, the efforts in the field of communications have had two main objectives: to furnish Army troops around the world with the most reliable, secure, and efficient equipment available and to plan ahead for the development and procurement of even better equipment as fast as new technology permits. These goals will remain constant in an area where change is the norm.

V. Personnel

When Secretary for the Army Martin R. Hoffmann delivered his statement on the status of the Army to Congress in February 1976, he began his comments on personnel with a description of the individual soldier.

> Let me introduce a typical soldier. Today's soldier may be male or female, 23 years of age, and has 3 years of active military service. He is 5′10″ tall and weighs 167 pounds while she is 5′4″ tall and weighs 130 pounds. This soldier is among the 80 percent of the total strength of the Army who are high school graduates and there is an even chance that he is married. Most likely, he or she came from a community of approximately 25,000 people, and at the time of entry into service the family's annual income was around $10,000; probably not over $15,000. There is a one-third chance that a member of his or her family had previously served in the Army. Six times out of ten he will be in a combat unit. Today's soldier is well motivated and qualified in his military skills, interested in the military profession, and provides a challenge to Army leadership. . . .

At the beginning of fiscal year 1976, there were 783,900 soldiers in the active Army, backed up by 627,000 members of the reserve components, and a work force of 434,700 civilian employees.

Military Strength

The military strength of the Army declined from 783,900 on 30 June 1975 to a low of 767,700 in December 1975 and then rose by the end of June 1976 to 779,000, which was 3,000 below the authorized figure of 782,000. Although Congress had set the end strength for the transition quarter at 790,000, the Army reduced it to 785,000 because this number represented a more logical progression from the actual strength at the close of fiscal year 1976 to the authorized end strength of 790,000 for fiscal year 1977. On 30 September 1976 the Army's actual strength was 782,200, falling 2,800 short of the adjusted goal and 7,800 below the congressional authorization.

The Army's failure to reach its authorized end strength was the result of a decrease in the number of volunteers, substantially reduced recruiting resources, and a conscious effort to maintain the highest possible quality of recruits. The Army preferred a relatively minor decline in total strength to a major decrease in the quality of enlistees. Average strength ceilings, imposed in order to remain within appropriated funding levels,

were responsible for monthly fluctuations and also contributed to the discrepancy between the Army's authorized and actual end strength.

The breakdown of actual military strength at the end of June and September 1976 was as follows:

	30 June 1976	30 September 1976
Officers	98,211 (436)*	97,876 (435)*
Enlisted personnel	677,722 (3)*	680,074 (3)*
U.S. Military Academy cadets	3,045	4,280
Total	778,978 (439)*	782,230 (438)*

* Numbers in parentheses represent reimbursable active duty personnel, who are paid from Corps of Engineers, Civil Works, Postal, and Reserve Components appropriations but are not included in the total strength figures.

Enlisted Personnel

During fiscal year 1976 the Army recruited 193,000 men and women, achieving 100.2 percent of the recruiting objective for enlisted personnel. While there were quality gains early in the year, results during the second half declined so rapidly that the annual quality achievements were considerably short of the goals. Enlistments in the transition quarter, during normally peak months, fell short of both quantity and quality goals. As shown in the table below, these shortfalls were in the recruiting of males with no former service, the largest and most difficult enlistment category. Female enlistees and those with previous service, on the other hand, met or surpassed the objectives.

RECRUITING STATISTICS

	Fiscal Year 1976			Transition Quarter		
	Required	Actual	Percent	Required	Actual	Percent
Males with no prior service	164,100	164,300	100.1	51,500	48,900	95.0
(Percent with high school diplomas)	(62.5)	(55.6)	—	(73.0)	(57.0)	—
Females with no prior service	15,900	15,900	99.9	4,300	4,300	101.1
(Percent with high school diplomas)	(90.0)	(89.6)	—	(90.0)	(90.7)	—
Personnel with prior service	12,600	12,800	102.0	3,600	3,800	105.7
(Percent with high school diplomas)	—	(81.7)	—	—	(81.9)	—
Total	192,600	193,000	100.2	59,400	57,000	96.0

These disappointing results were attributed to such factors as limited enlistment options, a somewhat improving economy, and stringently constrained resources, which together created an increasingly unfavorable recruiting environment. Of particular relevance were the elimination of the two-year enlistment option and congressional reductions in advertising funds and the number of recruiters.

Nevertheless, the Army continued its efforts to increase and improve the enlisted force. It denied enlistment to individuals who had not completed the ninth grade, extended the 270-day Delayed Entry Program to 365 days, and appointed to grade E–2 members of that program whose referral of at least two male high school graduates had resulted in enlistments. The Army also increased force stability and

gained assignment flexibility by achieving a rate of 25 percent for enlistments of four or more years, authorizing the deployment of soldiers with their units during their period of stabilization, and stressing enlistments for guaranteed training only rather than for unit of choice options.

To attract more volunteers, the Army established an airborne enlistment option, permitted enlistment of soldiers whose contracts had been voided because of fraudulent enlistment with the connivance of recruiting officials, and allowed waiver requests from an individual with dependents under eighteen years of age whose spouse was already on active duty with any service. Also, the minimum enlistment age for women was changed to seventeen, as for men. Finally, the Army furnished information on discharged personnel to a centralized Defense file and now shares enlistment eligibility data with all military services.

To manage recruiting more closely, the Army in August 1975 switched from monthly to weekly objectives. Using a computerized display similar to an airline reservation system, which showed the personnel requirements of Army units by numbers and skills, the Recruiting Command planned to recruit each week the number and type of enlistees needed. This new procedure was a big step toward the Army's goal of putting the right soldier in the right job at the right time.

In April 1976 the Secretary of Defense approved the June 1975 revised edition of the Army's Enlisted Force Management Plan, which provides long-term numerical objectives. An important feature of the revised plan is the Year Group Management Program. Developed to attain skill and grade balance, the program limits first-term reenlistments through qualitative standards and allows careerists (soldiers serving on their second subsequent terms) to remain in the Army so long as they measure up.

Striving to maintain a balance between quality and quantity in its reenlistment program, the Army quickly realized that the first-term reenlistment objective of 17,300 for fiscal year 1976 was overambitious. It therefore set a more realistic goal of 14,536, making up the difference by increasing recruiting objectives for those with previous service. Even with this reduction, the program achieved only 93.8 percent of the goal. Career reenlistments, on the other hand, fell short by only 3 percent.

The quality of reenlistees improved substantially during the year, with 81 percent of the first termers and 91.6 percent of the careerists having a high school diploma or its equivalent. These figures represented gains of 9.4 percent and 7.8 percent, respectively, over the previous fiscal year. Meanwhile, the percentage of reenlistees requiring waivers declined from 7 to 3 percent for first termers and from 6.4 to 5.4 percent for career soldiers.

In the transition quarter, first-term reenlistments were only 80.6 percent of the assigned goal, but career reenlistments surpassed the objective by 5.5 percent. The following table shows the reenlistment results for the past fifteen months.

REENLISTMENT RESULTS [1]

	Fiscal Year 1976			Transition Quarter		
	Objective	Achieved	Achieved Percent	Objective	Achieved	Achieved Percent
First term	17,300	13,637	78.8	6,032	4,860	80.6
(Male)	—	(12,337)	—	—	(4,292)	—
(Female)	—	(1,300)	—	—	(568)	—
Career	38,241	37,101	97.0	9,762	10,301	105.5
(Male)	—	(36,440)	—	—	(10,072)	—
(Female)	—	(661)	—	—	(229)	—

[1] These figures exclude two- to ninety-day prior service accessions and extensions, which are reported elsewhere.

After reviewing the fiscal year 1976 statistics, the Army made several changes in policies and procedures to retain more first termers. Soldiers with general court-martial convictions or more than fifteen days of absence without leave were allowed to request a waiver of these disqualifications. The practice of categorizing potential reenlistees into two groups according to their qualifications was replaced by management based on primary military occupational specialties. Except in unusual cases, all reenlistment applications were to be forwarded to the Military Personnel Center by telephone. Finally, the Army staff obtained approval for wider use of an automated system for matching the assignment preferences of prospective reenlistees with Army needs.

Development and implementation of the Enlisted Personnel Management System (EPMS) continued during the report period. As of 1 September 1976, about 450,000 soldiers (66 percent of the enlisted force) were under the system in the following career management fields (CMF): CMF 11 (Maneuver Combat Arms), CMF 16 (Air Defense), CMF 33 (Electronic Warfare/Intercept Systems Maintenance), CMF 55 (Ammunition), CMF 63 (Mechanical Maintenance), CMF 64 (Transportation), CMF 74 (Automatic Data Processing), CMF 76 (Supply), and CMF 95 (Law Enforcement). Thirteen additional career management fields will be brought under the Enlisted Personnel Management System during fiscal year 1977, with the final phase of the transition to EPMS scheduled to begin on 1 April 1978.

During the past year, several changes were made in the Enlisted Evaluation System to insure its compatibility with and support of the Enlisted Personnel Management System. A major change was the adoption, on 1 October 1975, of separate evaluation reports for grades E–1 through E–5 and grades E–6 through E–9. These new reports take into account the differences in performance traits and leadership requirements be-

tween junior and senior enlisted personnel and thus provide a more accurate instrument for evaluating duty performance.

Policy changes concerning enlisted promotions also went into effect during fiscal year 1976. On 1 July 1975 the minimum time in service for advancement to grade E–4 increased from twenty-one to twenty-four months, and starting 1 March 1976 most soldiers were no longer permitted to compete for promotion to grades E–5 and E–6 in their secondary military occupational specialties. There were also changes in waiver criteria for E–4 and E–5 promotions. Finally, effective 1 May 1976, the provision authorizing advancement to grade E–2 upon completion of four months of active Federal Service was amended to include time spent by members of the reserve components on initial active duty for training.

Efforts to obtain a stabilized enlisted grade structure continued, with particular emphasis on the top six grades. At the end of the report period, 60.43 percent of the total enlisted force was in these grades. The objective has been set at 63 percent, and the Army expects to attain it by fiscal year 1979. The following table compares the Army's enlisted strength by grade as of 30 June 1975 and 30 September 1976.

ENLISTED GRADE STRUCTURE

Grade	30 June 1975	30 September 1976
E-9	3,711	3,689
E-8	12,682	12,928
E-7	45,739	45,639
E-6	72,215	71,035
E-5	108,286	108,925
E-4	167,047	168,740
E-3	104,925	101,240
E-2	104,295	98,750
E-1	59,423	69,128
Total	678,323	680,074

In addition to programs to recruit and retain the best qualified men and women, the Army also has procedures for removing substandard personnel from the enlisted ranks. This year new enlistees who could not adapt to the discipline of Army life were separated during their first 180 days of service under the Trainee Discharge Program, and soldiers with six to thirty-six months of service who were not productive were released under the Expeditious Discharge Program.

In recent years, the educational level of the enlisted force has consistently improved. The percentage of soldiers having high school diplomas or the equivalent increased as follows from fiscal year 1973 through fiscal year 1976 (including transition quarter): 71.3, 73.5, 77.9, and 82.2 respectively. Overall mental aptitude also showed marked improvement, as illustrated by increases in the top three mental categories and a decrease in the lowest acceptable category:

Mental Category	Fiscal Years 1973	1974	1975	1976 *
I	4.4%	4.1%	4.1%	4.5%
II	28.2%	28.6%	29.2%	29.8%
III	48.7%	49.8%	51.8%	53.1%
IV	18.7%	17.5%	14.9%	12.6%

* Includes transition quarter.

These statistics are encouraging. The sustained improvement in quality, as measured by educational level and mental capacity, indicates that on the average the volunteer is a higher caliber soldier than his draftee predecessor.

Officer Personnel

Army officer strength decreased during fiscal year 1976 from 102,565 to 98,211, the lowest level since 1950 and a 43 percent decline from the peak strength during the war in Vietnam. By the end of September 1976, it had dropped to 97,876. The following table shows a breakdown of the officer strength by grade.

OFFICER GRADE STRUCTURE [1]

30 September 1976

Commissioned Officers	
General officers	430
Colonel	4,368
Lieutenant colonel	10,835
Major	16,850
Captain	31,436
First lieutenant	10,320
Second lieutenant	10,951
Total	85,190
Warrant Officers	
CW-4	1,282
CW-3	3,093
CW-2	6,055
CW-1	2,256
Total	12,686

[1] These numbers exclude 435 reimbursable active duty personnel.

In January 1975 the Secretary of the Army directed a reduction of the officer corps to minimum essential strength. Major commands then examined their own organizations and identified officer positions for elimination or downgrading. In addition, four special teams made comprehensive surveys throughout the United States and overseas. By September 1975 the Army-wide review was completed and, as a result, 4,568 officer positions were eliminated, 3,087 downgraded, and 617 converted to enlisted. This major effort, nevertheless, fell about 1,000 short of aligning officer requirements with the authorized strength level of 98,125. Furthermore, new studies indicated a need for more, rather than fewer, officers. The Army staff therefore developed a program to stabilize officer strength at 98,600. After reviewing this program, the Secretary of Defense established the Army's officer end strength at 98,000 for fiscal years 1978 through 1982. Meanwhile, the Army began to

analyze policies and procedures that generate officer requirements and to develop better methods of quantifying these requirements and justifying them to the Secretary of Defense and to Congress.

Officer accessions for the fifteen-month report period numbered 13,046, an increase from the fiscal year 1975 total of 9,224, which had been the lowest since World War II. Once again, the Reserve Officers' Training Corps (ROTC) was by far the largest source of new Army officers, as shown in the table below.

OFFICER PROCUREMENT BY SOURCE
1 July 1975–30 September 1976

United States Military Academy	854
Reserve Officers' Training Corps	5,385
Officer Candidate School	463
Voluntary active duty	168
Direct appointment	
Judge Advocate General's Corps, Medical Service Corps, Chaplains	289
Women's Army Corps	643
Medical Corps, Dental Corps, Veterinary Corps	2,425
Other	83
Nurses and medical specialists	892
Warrant officers	1,724
Miscellaneous[1]	120
Total	13,046

[1] Includes administrative gains such as recall from retired list and interservice transfers.

ROTC enrollment increased for the second consecutive year, following seven years of decline from its peak of over 177,000 students in the 1966–67 school year. During the 1975–76 academic year 48,400 students, of which 9,324 were women, were enrolled in ROTC. Improved management of the program, increased recruiting and publicity, and a more challenging curriculum were responsible for the higher total enrollment. During the fiscal year 1976 Defense appropriations hearings, Congress had expressed concern at the many ROTC units with low enrollments and had considered limiting funds for schools that had fewer than fifteen ROTC graduates for two successive years. While Congress did not restrict this year's funds, it did indicate that such limitations would be considered in the future. As a result, the Army developed an intensive management plan to increase enrollments and the number of graduates at low-producing units. The Army discontinued ROTC units at Alfred University, Alfred, New York, and Lake Superior State College, Sault Sainte Marie, Michigan, on 30 June 1976.

The authorized officer end strength for the Army Medical Department for fiscal year 1976 was 15,159, a decrease of 3.6 percent from last year's authorization level of 15,722. The following table compares the authorized and actual officer strength by corps as of 30 June 1976:

	Authorized	Actual
Medical Corps	4,473	4,398
Dental Corps	1,768	1,810
Veterinary Corps	430	434
Medical Service Corps	4,558	4,634
Army Nurse Corps	3,510	3,535
Army Medical Specialist Corps	420	425
Total	15,159	15,236

Medical Corps strength continued its slow decline, chiefly as a result of dwindling assets from the draft-related Berry Plan and a lag in accessions from volunteer programs. The absence of the physician draft was felt in all specialties but had the greatest impact on the growing shortage of general medical officers. The number of qualified volunteers increased but not enough to meet requirements. Foreign medical graduates represented a significant percentage of volunteer applicants, but all too often their training, abilities, and facility in English did not meet the Army's standards.

A good source of new medical officers is the Armed Forces Health Professions Scholarship Program, which was authorized by Congress in fiscal year 1973. In return for full tuition and a $400 monthly stipend, scholarship recipients agree to serve on active duty in their medical specialties. During the year the Army filled 1,741 of its 1,850 vacancies under the program, while 548 students graduated and either entered active duty or were deferred for additional training. The Army Medical Department (AMEDD) expects that by 1981 approximately 50 percent of Medical Corps accessions will be through the Health Professions Scholarship Program. Annually the Medical Department also receives a number of newly commissioned officers through the Reserve Officers' Training Corp. This year, in addition to 280 male officers, the department gained thirty-four female ROTC graduates. AMEDD female accessions through ROTC are expected to increase in the future.

For the second consecutive year officer promotions increased. Excluding Medical and Dental Corps officers, 809 were promoted to colonel, 2,125 to lieutenant colonel, 2,838 to major, 5,960 to captain, 335 to chief warrant officer, W–4, and 889 to chief warrant officer, W–3.

This year, for the first time, the Army staff submitted to the Secretary of the Army a single, comprehensive package of recommendations concerning promotions to all temporary field-grade ranks. Past procedures had called for a separate report to the secretary just before each promotion board convened. The new procedure is superior to the old fragmented approach, since it presents a complete promotion picture, including selection rates, zones of consideration, and policy guidance for selection boards for the entire year.

In January 1976 the Secretary of the Army approved recommendations by the Army Board for Correction of Military Records to give additional opportunities for promotion to officers not selected for certain Army of the United States (AUS) grades in 1974 and 1975. The secretary concluded that the Army's failure to appoint reserve officers to the 1974 and 1975 AUS promotion boards may have resulted in an injustice. New boards, however, recommended promotions for 1,165 reserve officers who had not been selected by the original boards. Of these, 325 were former officers no longer on active duty.

In July 1976 the Army announced a new Defense promotion policy for Medical and Dental officers. In recent years their promotions have been accelerated in order to encourage them to remain in military service. The objectives of the new policy are to reduce the percentages of Medical and Dental officers in the senior grades and to establish grade and promotion guidelines for physicians and dentists consistent with the principle of equitable personnel procedures for all officers as stated in the proposed Defense Officer Personnel Management Act (DOPMA).

This year the Army again participated in congressional hearings on DOPMA legislation, which relates to the appointment, promotion, separation, and retirement of commissioned officers of the armed forces. Although the House of Representatives voted in favor of the act during the 94th Congress, the Senate deferred action on the proposal. The Department of Defense intends to resubmit the act to the 95th Congress.

The proposed Defense Officer Personnel Management Act is compatible with the Officer Personnel Management System (OPMS), which is the Army's framework for the professional development of commissioned officers. This system covers all officers except those managed by the Army Medical Department, the Chaplains, and the Judge Advocate General's Corps. A key element of the Officer Personnel Management System is dual specialization: each officer is expected to develop expertise in a primary and in an alternate specialty during his career. The Officer Personnel Management System is particularly important to individuals whose chosen area of expertise does not coincide with one of the traditional career branches.

In July 1975 the Army established an information specialty under the Officer Personnel Management System. The new specialty, redesignated on 1 July 1976 as public affairs, included twice as many officers as the former Information Officer Program, which had about 350. The influx of large numbers of inexperienced and untrained specialty members complicated the task of implementing the Officer Personnel Management System. Another problem was that public affairs officers made a poor showing on the 1976 Army of the United States promotion list. By the end of September 1976, however, various efforts to improve the specialty were in progress under the direction of the Chief of Public Affairs.

In September 1975 aviation also became an OPMS specialty. Before this time, the Army had treated aviation as a skill that supported development in many other specialties. The change gives aviators a management system and career pattern comparable to those for other commissioned officers, and the new specialty is expected to help improve aviation support to the ground commander.

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Since the Officer Personnel Management System does not include members of the Army Medical Department, the department has prepared its own career management guide, which is similar to Department of the Army Pamphlet 600–3, *Officer Professional Development and Utilization*. The final draft was completed this year and the published guide will be distributed to the field in May or June 1977. Another medical personnel management project, the AMEDD Command Selection Program, began on 1 July 1976 in the Medical Service Corps and the Dental Corps. The Medical Corps will adopt the program on 1 June 1977.

Pay, Leave, and Travel

Title 10 of the United States Code requires the president to conduct a review of military compensation at least every four years. The current study, which was started in January 1975, is a comprehensive analysis of the principles and concepts of military compensation and should improve standards for setting and adjusting compensation and methods of payment. The report, prepared by the Quadrennial Review of Military Compensation Committee, will be submitted to the President early in 1977.

There were a number of legislative changes affecting military pay, leave, and travel during the report period. Recognizing that the cost of living had risen substantially in recent years, Congress raised the military basic pay ceiling, which had been frozen at $36,000 since 1969, by the same percentage as the average pay raise for federal General Service civilian employees. As a result, on 1 October 1975 maximum basic pay increased to $37,800, and on 1 October 1976 it will increase to $39,600. In July 1976 the military pay raise mechanism was revised to permit the president to reallocate up to 25 percent of basic pay increases to allowances for quarters or subsistence, which are tax exempt. Congress also changed the usual per diem allowance for soldiers on temporary duty from $25 to $35 and the expense allowance for high-cost areas from $40 to $50 a day.

In September 1975 Congress enacted legislation that eliminated military retired pay inversion, a situation in which soldiers remaining on active duty after they were eligible for retirement could face losses in retired pay because automatic cost of living increases for retirees were higher than active duty pay raises. Under the new provisions, a soldier's monthly retired pay may not be less than it would have been had he retired at an earlier date in his career.

Effective 1 September 1976 the payment of accrued leave to officers and enlisted personnel was put on the same basis. Before this time, officers could be paid a maximum of sixty days accrued leave throughout their career, while enlisted men and women could cash in

sixty days at the end of each enlistment. Now all soldiers are limited to a maximum accrued leave payment of sixty days during their entire term of service.

The Variable Incentive Pay Act for Physicians, enacted in May 1974, expired on 30 September 1976. Congress had passed the act to attract and retain enough doctors to meet the medical requirements of the military services by paying a bonus of up to $13,000 a year. Recognizing the continued need for the bonus, Congress extended the legislative authority for variable incentive pay until 30 September 1977.

When temporary legislation exempting the Armed Forces Health Professions Scholarship Program from federal taxation expired on 31 December 1975, the Internal Revenue Service ruled that students had to pay income tax on the full amount of their scholarships and began withholding tax from scholarship recipients. Congress, however, in a tax reform act of 1976 extended tax relief through 1979 for students who were enrolled in the program in 1976. Because of the frequency of military moves, tax relief was also granted in connection with moving expenses for military personnel and their dependents.

Congress also amended the tax law that kept members of the reserve components from participating in the Individual Retirement Account because their military service made them eligible for future retirement benefits. New legislation removed this restriction and permitted reservists to participate in the Individual Retirement Account unless an individual was on active duty (other than active duty for training) for more than ninety days during a tax year. Another new provision of the tax code eliminated the tax exemption of disability retired pay for persons joining the military services after 1975, unless the disability resulted from armed conflict, extra-hazardous duty, simulation of war conditions, or an instrumentality of war. Veterans Administration benefits, however, remained tax exempt.

Finally, tax reform legislation provided for the automatic withholding of state income taxes from monthly pay to meet the tax obligation of each person's state of legal residence, as determined under the Soldiers' and Sailors' Civil Relief Act. Procedures for carrying out this new law will be developed by the states, the Department of the Treasury, and the Department of Defense.

Equal Opportunity

The Department of the Army Standing Committee on Equal Opportunity was established on 4 March 1976 as a result of recommendations made by the Ad Hoc General Officers' Steering Committee on Equal Opportunity. The new committee will review Army policies to assure their compatibility with the principle of equal opportunity.

The strength and role of women in the Army continued to expand during the report period. On 30 September 1976, the active Army had over 5,100 women officers and more than 44,400 enlisted women, a substantial increase from the total female strength of 42,297 in June 1975. Women officers were detailed to all branches except Infantry, Armor, Field Artillery, and Air Defense Artillery, and enlisted women were serving in 371 of the Army's 406 military occupational specialties (MOS's). A comprehensive study on women in the Army concluded that Army policies reflected current national attitudes and were consistent with combat effectiveness as well as women's rights. It highlighted, however, a need for more information in several areas, which resulted in the Army's undertaking projects such as the examination of a common curriculum for enlisted men and women in basic initial entry training, a field test to determine the number of women to be placed in various Army units, and studies to establish MOS physical requirements and to review assignment guidelines. All of these were part of the Army's effort to assure equal opportunity for women.

The number of women in the Army National Guard also continued to increase. At the end of September 1976, there were 11,146 guardswomen, including 489 officers, who were serving in a wide variety of nontraditional jobs. Meanwhile, a study was under way to determine the best female ratio for different types of National Guard units and to validate a tentative goal of approximately 20,000 guardswomen.

The female strength of the Army Reserve rose above 19,000 officers and enlisted personnel by September 1976. The rapid growth in the number of women since 1972 resulted from changes in Army policies, development of new training programs, and extensive advertising and recruiting. Approximately 56 percent of the women without previous service enlisted in the Army Reserve on the basis of a civilian skill that equated with a military occupational specialty. This enlistment option offered the individual advanced rank and accelerated promotion, while the Army benefited by savings in training costs.

Female participation in the Reserve Officers' Training Corps has grown dramatically since enrollment of women began during the 1972–73 school year as an experimental program involving 212 students at ten institutions. During the 1975–76 academic year, 19 percent of all ROTC cadets were females. They were enrolled in 280 of the 285 schools offering Army ROTC, and in May 1976 women received commissions through the program for the first time. As mentioned above, 34 of the 314 ROTC graduates who entered the Army Medical Department this year were women. Of these, 32 entered the Medical Service Corps, 1 joined the Army Nurse Corps, and 1 went into the Army Medical Specialist Corps.

On 7 October 1975 the president signed into law the bill directing that women be admitted to the service academies. The United States Military Academy at West Point got 867 applications from women, of whom 631 received nominations, 176 were found qualified, 148 were offered admission, and 119 entered the academy on 7 July 1976 as members of the class of 1980. In preparation for the admission of women, the academy reviewed all areas of cadet life and incorporated practical changes. The training program remained essentially identical for men and women with exceptions limited largely to those required by physiological differences. All members of the Corps of Cadets as well as the staff and faculty attended human relations training and information briefings. Data from surveys concerning cadet, staff, and faculty attitudes were used in leadership training for the cadets and will contribute to Project Athena, a special study of the effects of the admission of women on West Point.

Leadership and Motivation

In February 1976 the Chief of Staff requested the Deputy Chief of Staff for Personnel (DCSPER) to reexamine the role of the noncommissioned officer (NCO) in the Army. The Deputy Chief of Staff for Personnel solicited views on the duties and responsibilities of NCO's from major commands, selected general officers, and—through the Sergeant Major of the Army—from a large number of senior noncommissioned officers. The DCSPER review showed that both officers and enlisted personnel had distorted perceptions about the role, duties, and authority of the noncommissioned officer. The Chief of Staff therefore directed the Training and Doctrine Command (TRADOC) to make a doctrinal study of the role of the noncommissioned officer and to stress this role in all service schools. Results of the TRADOC study, conducted from May to September 1976, indicated a definite need for changes in Army policies, procedures, and regulations. Some of the recommended changes were explicitly recognizing that the NCO chain supplements the higher chain of command, directing commanders to require their noncommissioned officers to perform certain duties, designating the command sergeant major and first sergeant as the senior noncommissioned officer of a given unit, and recognizing the primary role of the noncommissioned officer as a first-line supervisor in executing policies pertaining to the performance, training, appearance, and conduct of enlisted personnel.

The Training and Doctrine Command also undertook a study on institutional ethics in response to questions to the Secretary of the Army at congressional hearings in June 1976. The purpose of the study was to determine the extent to which the Army's school system offered training that reinforced the ethical dimension of leadership and if there was a

uniform honor code for Officer Candidate School, Reserve Officers' Training Corps, and direct commissioning programs. The study showed that service schools up to and including the Command and General Staff College did offer some ethics, moral, and officership training, but that such training was not standardized and varied widely in content. Likewise, there was little uniformity in the honor codes of the various precommissioning educational systems. As a result of this and other studies, the Training and Doctrine Command called upon the Administration Center to develop an ethics instructional package, which would assist major commands and service schools in conducting uniform ethics training throughout the Army.

On 1 July 1975, the U.S. Army Organizational Effectiveness Training Center was established at Fort Ord, California, to train captains and majors as organizational effectiveness staff officers. These officers help commanders examine the distinctly human nature of their organizations and then take action to untangle and streamline specific functions and programs. They try to involve the chain of command in systematic efforts, based on the newest behavioral science and management methods, to assess and improve total unit performance. The goal is to make people at all echelons more involved, motivated, committed, and effective—both individually and collectively—in the accomplishment of the organization's mission. By September 1976 more than one hundred officers had completed training in organizational effectiveness. Plans call for expanding the program and assigning these trained officers to all Army commands at separate brigade level and higher. Organizational effectiveness training for selected noncommissioned officers, members of the reserve components, and Army civilian personnel will be considered during fiscal year 1977.

The decision of the American Federation of Government Employees to open its membership to military personnel in September 1976 presented a potential problem for the Army as well as for the other services. In response to questions from the press, the Department of Defense issued a statement declaring its opposition to military unionization. The Army position on this controversial issue was essentially the same. Although the Army is not antiunion in principle, as an institution it opposes the application of collective bargaining to the military profession since this could lead to an erosion of command authority. Military service entails a degree of loyalty and discipline unparalleled in the civilian sector because success in combat demands immediate and total responsiveness to lawful orders. Commanders, therefore, were not authorized to bargain with unions representing or seeking to represent servicemen.

Alcohol and Drug Abuse

The Army continued its efforts to prevent the abuse of alcohol and other drugs by soldiers on active duty, reservists, retirees, their families, and civilian employees. Since total elimination of drug abuse does not appear to be possible, the Army has been committing substantial resources to contain the problem and reduce its impact on personnel readiness and productivity. The goal of the Army's Alcohol and Drug Abuse Prevention and Control Program is to identify actual and potential abusers of alcohol and other drugs as early as possible and, through intensive short-term rehabilitation, to return abusers to their jobs as effective and reliable individuals. During the past year, 31,322 soldiers entered rehabilitation (40 percent for problems related to alcohol and 60 percent for abuse of other drugs), and an average of 16,370 soldiers received help every month under this program (44 percent for alcohol and 56 percent for other drugs).

On 1 May 1976 the Army published a new Army regulation, 600–85, which for the first time assembled all of the circulars, pamphlets, regulations, and directives associated with the Alcohol and Drug Abuse Prevention and Control Program into one comprehensive document. Throughout the report period, there was more emphasis than before on the prevention of alcohol abuse.

Crime, Discipline, and Military Justice

Discipline improved and crime decreased in the Army during fiscal year 1976. Crimes of violence, crimes against property, and drug offenses were all below the previous year's levels. Absenteeism continued to decline; both the absent without leave (AWOL) and desertion rates were less than half of what they had been two years earlier. The number of persons tried by general, special, and summary courts-martial dropped significantly, and the court-martial rate was the lowest in over a decade. Nonjudicial punishment under Article 15 of the Uniform Code of Military Justice also decreased.

In July, August, and September 1976, the use and possession of marihuana increased, but other drug offenses declined. The level of crimes against property was slightly higher than that for the same period the previous year, and nonjudicial punishment increased somewhat, but crimes of violence, absenteeism, and courts-martial all decreased. The rate of less than honorable separations, which had remained about the same for two years, dropped significantly during the transition quarter.

The breakdown of court-martial statistics for fiscal year 1976 and the transition quarter (shown in parentheses) was as follows:

	Convicted		Acquitted		Total	
General	1,305	(271)	171	(37)	1,476	(308)
Special	6,045[a]	(1,152)[b]	884	(203)	6,929[a]	(1,355)[b]
Summary	1,797	(364)	202	(71)	1,999	(435)
Total	9,147	(1,787)	1,257	(311)	10,404	(2,098)

[a] In 837 of these cases, the approved sentence included a bad conduct discharge.
[b] In 188 of these cases, the approved sentence included a bad conduct discharge.

Table 1 shows the various statistical indicators of lack of discipline in the Army for January 1971 through September 1976. The overall improvement during this period can be attributed to such factors as the end of the war in Vietnam and the end of the draft, substantial reductions in the total strength of the Army, higher entrance standards for new soldiers, better leadership and personnel management, and more effective programs specifically designed to improve discipline and professionalism throughout the Army.

The continuing decline of AWOL and desertion rates caused a paraliel decrease in the number of soldiers returning from absentee status. This decrease resulted in a major work load reduction for the Army's personnel control facilities, which are responsible for the expeditious disposition—either administrative or judicial—of individuals returned to military control after an unauthorized absence. Because of the downward trend of the returnee population, the Office of the Deputy Chief of Staff for Personnel approved the closing of six personnel control facilities in the United States, thus cutting the number of operating facilities in half.

The Army's prisoner population also continued to decline in fiscal year 1976. In fact, the average number of prisoners reached the lowest level since before World War II. As a result, the Office of the Deputy Chief of Staff for Personnel began to develop a plan that will adjust the Army confinement system to reduced prisoner populations and make better use of resources and modern facilities.

Several new military police regulations went into effect during the past year. On 15 January 1976, Army Regulation 190–47 consolidated into one document nine former regulations dealing with various aspects of the Army's correctional system. A change published in March announced new policies and standards concerning the care, custody, and treatment of offenders and provided a confinement system for women closely resembling that for men. Another new Army regulation, 190–34, covered correctional custody, as prescribed by Article 15 of the Uniform Code of Military Justice. Effective 1 January 1976, the regulation was amended to include correctional custody of women, reflecting the new Army policy to give equal correctional treatment to service members of both sexes. As a result of an agreement between the Department of

TABLE 1—INDISCIPLINE INDEX

(Rate per 1,000)

Calendar Year	Quarter	Absence Without Leave	Desertion	Crimes of Violence	Crimes Against Property	Marihuana Use and Possession	Other drug Offenses	Courts-Martial	Nonjudicial Punishment	Separations Less than Honorable
1971	1	47.0	19.2	1.77	18.80	2.75	2.09	8.73	52.12	4.94
	2	41.9	16.0	2.04	21.64	2.43	2.79	9.11	52.25	6.35
	3	42.8	17.2	2.19	24.32	2.03	2.96	9.00	54.45	7.42
	4	40.9	16.1	2.14	23.46	2.27	2.34	7.63	51.31	9.56
1972	1	37.9	14.1	1.92	21.64	2.79	1.99	8.03	61.67	11.15
	2	44.8	14.6	1.87	22.07	2.79	1.63	7.20	53.93	12.16
	3	40.6	12.9	1.84	22.76	3.20	1.77	5.85	57.78	9.90
	4	34.2	11.2	2.04	30.38	3.78	1.51	6.13	50.40	7.98
1973	1	43.9	13.2	2.02	19.87	5.34	1.83	7.01	57.05	7.76
	2	40.9	14.8	1.93	20.76	5.55	1.87	7.57	56.33	9.35
	3	42.9	14.4	1.99	23.27	5.98	2.21	7.42	57.71	8.83
	4	28.8	9.0	2.01	22.78	6.85	1.94	6.88	51.80	8.69
1974	1	30.1	8.8	2.04	21.70	8.59	2.24	6.85	56.49	7.79
	2	28.1	8.9	1.90	22.12	7.96	2.06	6.50	54.32	7.21
	3	28.0	8.3	2.21	22.45	7.79	1.92	6.02	52.78	7.05
	4	21.8	6.8	2.10	23.50	8.16	2.00	5.25	48.01	6.38
1975	1	22.9	5.7	2.09	21.95	8.49	2.24	5.05	57.48	5.95
	2	19.6	5.2	1.98	21.96	7.58	2.31	4.25	56.76	6.21
	3	18.8	5.0	2.14	22.72	6.11	2.06	3.88	52.24	7.47
	4	12.9	3.7	1.75	22.04	6.45	1.82	3.33	45.72	6.11
1976	1	14.2	3.2	1.65	20.44	8.61	1.61	3.18	51.87	6.05
	2	15.1	3.5	1.66	22.33	8.04	1.53	2.92	53.05	6.02
	3	16.0	4.0	1.93	22.79	8.33	1.58	2.63	56.95	5.01

Justice and the Department of Defense to furnish housing on military installations for key federal witnesses, the Army also published Army Regulation 190–48, dated 3 March 1976, concerning protection of federal witnesses on active Army installations.

There were a number of important studies in the general area of military law and justice. On 28 February 1976 the Chief of Staff directed the Army staff to evaluate the use, acquisition, retention, and disposition of criminal records. After a thorough survey, a study group concluded that the Army's law enforcement system was maintaining and using criminal records in accordance with the Freedom of Information and Privacy Acts. Next, in order to clarify Army policy, the group undertook the revision of several Army regulations. When these revisions are completed, the study will be forwarded to the Chief of Staff for approval. Meanwhile, another group analyzed ways to achieve better compliance with the obligations of the Geneva Conventions. It examined the experiences of enemy prisoners of war in Vietnam as well as current U.S. policies regarding the treatment and accountability of enemy prisoners and civilian internees.

The Army also studied the realignment of investigative responsibilities between the military police and the Criminal Investigation Command. The decision was that the responsibilities of the military police should be extended to include investigations of criminal offenses punishable by one year of confinement or less and investigations of crimes against property valued under $250, with certain exceptions in cases of adultery, maltreatment, and negligent homicide. These changes will become effective in February 1977.

In November 1975 the Army adopted more strict selection criteria for military police investigators and a new screening procedure to expedite the processing of candidates. Procedures for handling evidence and for the use of criminal investigation funds have also been revised in order to reduce the time spent by military police investigators and criminal investigation agents on purely administrative tasks.

Expansion of the Military Police Management Information System (MPMIS) continued during the report period. Designed to automate and standardize certain military police reporting functions, the system consists of several subsystems, or modules, which are in various stages of development. Between July and September 1976 Army vehicle registration procedures were placed under the Military Police Management Information System at twenty-four installations, and completion of the Vehicle Registration System is scheduled for the end of February 1977. Programing and testing of the Correctional Reporting System, which provides data on the prisoner population at military confinement and correctional facilities, was completed during fiscal year 1976. Modifica-

tion of the Prisoner of War Information System has also been completed. This system fulfills reporting requirements of the Geneva Conventions and furnishes information on prisoners of war and other persons captured or detained by the United States during hostilities. Since prototype evaluation of another module, the Offense Reporting System, proved unsuccessful, it had to be redesigned. In its new configuration, the system automates crime reporting by installations to higher headquarters and provides selective enforcement data for crime prevention at the local level. Other projected MPMIS subsystems will cover traffic violations, traffic accidents, and desertion.

In March 1976 the Army also began plans to automate the collection and compilation of information on military justice. The plans call for using computers to sort the data quickly into a variety of formats to show important trends in military justice and to furnish information for comparison with civilian law enforcement.

The military magistrate program, implemented throughout the Army in October 1974, was expanded on 1 January 1976 to include review of pretrial confinement of all Army personnel in military confinement facilities by judge advocate magistrates. These magistrates had the authority to order release from pretrial confinement or permit continued confinement, with no provision for appeal. In addition to magistrates assigned to the U.S. Army Legal Services Agency, who were responsible for reviewing all pretrial confinement in the United States, Europe, and Korea, the Army made limited use of part-time, locally assigned magistrates in geographically remote areas with low average pretrial confinement populations. Military magistrates were placed under the supervisory control of full-time military judges, with the Chief Trial Judge, U.S. Army Judiciary, having responsibility for general administration of the program. A major change occurred in August 1976, when military judges were empowered to perform magisterial duties if so authorized by the Chief of the Army Judiciary or his designee. In accordance with this new provision, military judges will assume magisterial duties at most installations during fiscal year 1977, and the number of full-time military magistrates will consequently decrease.

Critics of the civilian and military judicial systems have often called for more continuing legal education for attorneys. In response, The Judge Advocate General directed the establishment of the Field Defense Services Branch, which was to become operational on 1 October 1976. The new branch will be a part of the Defense Appellate Division of the Legal Services Agency. Its primary mission will be to improve the quality and effectiveness of the Army's trial defense counsel by giving professional ethics guidance, trial tactics advice, and research assistance to defense counsel in the field. In coordination with The Judge Advocate

General's School in Charlottesville, Virginia, the Field Defense Services Branch will present instruction on defense counsel matters at The Judge Advocate General's Corps Basic Officer's Course and at a new semi-annual, four-day, continuing legal education course for trial defense counsel. It will also coordinate periodic regional defense counsel seminars. By using actual experiences of trial defense counsel, the new branch will be able to improve the defense services for each soldier accused of an offense under the Uniform Code of Military Justice.

Civilian Personnel

Civilian employees make up over one-third of the total manpower available to the Army. They perform over 90 percent of the Army's research and development and logistic functions, most of its base maintenance operations, and about half of its medical support. Furthermore, the civilian work force accomplishes this wide variety of essential support tasks more economically than such duties could be performed by soldiers. As of 30 September 1976, the Army's appropriated fund civilian employees numbered 417,684, of whom 342,499 were U.S. citizens and 75,185 were nationals of foreign countries, primarily Germany, Japan, and Korea. A 3.9 percent decrease in civilian strength occurred during the fifteen-month report period, a continuation of the reduction in civilian manpower that has been going on since 1969.

Productivity and cost reduction were once again key objectives. At the end of September 1976, the average grade of the Army's General Schedule (GS) employees was 7.57, an increase from last year's average of 7.39, due primarily to hiring freezes and losses of summer employees in lower grades. Nevertheless, the average grade remained below the ceiling set by the Department of Defense and below the average grade at the time the reduction program began in 1971. The Army also participated in a Defense-wide effort to reduce by 4 percent the number of employees in grades GS–13 and above during the next two years.

The Presidential Cost Reduction Campaign, conducted from May 1975 through May 1976, gave special recognition to federal employees whose contributions resulted in first-year savings of $5,000 or more. In addition to monetary or honorary awards, these individuals received letters signed by the president expressing his personal congratulations. By the end of the campaign, 837 Army employees had earned the presidential letter for having saved $67 million. This achievement, the highest in the Department of Defense and the second highest in the federal government, constituted 23 percent of the total cost savings under the president's program.

On 30 June 1976 the Vice Chief of Staff approved the establishment of the Commander's Award. The new award, which is equivalent to

the Army Commendation Medal for soldiers, will give commanders a form of honorary recognition for civilians that is more important than the Certificate of Achievement, but does not need approval by the Department of the Army.

Executive pay compression and retired pay inversion, mentioned earlier in connection with military personnel, also caused major problems for the civilian work force. Although legislation enacted in August 1975 will keep pay compression from worsening, it did not correct the inequities brought about by the freeze on executive salaries between 1969 and 1975, when lower grade salaries increased by nearly 34 percent. Pay compression, coupled with automatic cost of living increases of 50 percent in retired pay, created a pay inversion, which led to a large number of early retirements, especially among key executives, and caused problems in recruitment of suitable replacements.

Standardization of civilian pay systems within the Army progressed to the point that forty-eight installations were operating under the Standard Army Civilian Payroll System by 30 September 1976, and the total number of civilian payroll systems in use had been reduced from fifty-four to thirty-three. Extension of the standard system to remaining Army installations will be completed by December 1978. Meanwhile, a joint working group chaired by the Army will develop specifications for a single Department of Defense Standard Civilian Payroll System.

Relations with labor unions continued to go well, and union membership among Army employees continued to grow. By the end of September 1976, there were 722 exclusive bargaining units covering approximately 231,000 civilian employees, an increase of about 10,000 employees and thirteen units since 30 June 1975.

Efforts to improve the civilian career management system continued, and the Army made substantial progress in complying with the president's directive to strengthen internal programs of executive selection and training. During the report period, the number of managers trained under the Executive Development Program more than doubled, increasing from 1,722 to 3,646. As of 30 September 1976, the Army had identified 1,579 employees with high potential for becoming managers, and 981 of these had received formal training in management subjects. In addition, 384 current and potential managers participated in special assignments to develop management skills. During the past year, the Army exceeded its objective of maintaining a minimum strength of 3,500 career interns at the GS–5 and GS–7 levels, and total intern strength on 30 June 1976 was 3,522. Of the 1,656 interns selected during the year, 388, or 24.4 percent, were recruited from within the current work force.

The Army continued to stress various special employment programs, particularly those for Vietnam-era veterans. The 13,981 veterans appointed during the report period represented 18 percent of newly hired employees. A total of 4,128 Vietnam-era veterans were employed under the Veteran's Readjustment Authority; 2,668 of these were converted to career or career-conditional status after completing their training. The Army also hired 15,299 summer employees, including 10,500 disadvantaged youths.

Equality of opportunity for all civilian employees remained high among the Army's priorities. A new career program for equal employment opportunity personnel was established and the U.S. Civil Service Commission approved for the first time a four-year Equal Employment Opportunity Action Plan in place of annual plans. There was a slight decline in total numbers of minorities and women in the civilian work force; however the percentage of minorities increased from 17.2 to 17.5 percent and the percentage of women from 33.1 to 33.9 percent. Likewise, minority representation in grades GS–12 and above was up 7.7 percent from last year's level, and representation of women was up 13.9 percent.

In accordance with recommendations made by the Secretary of the Army's Task Force on Employment of Women, steps were taken to improve the position of women in the Army's civilian work force. Guidelines for the distribution of females in various career programs were developed, and numerical goals for women at all career grade levels were substantially increased. More women participated on career boards and in the career screening process. By the end of June 1976, women held 32.9 percent of all career intern positions outside the engineer and scientist fields, and a goal of 35 percent had been set for 31 December 1976. Plans also had been made for an extended search for minority and female candidates for consideration in filing executive positions at grades GS–15 and above.

In November 1975 the Army began an apprentice program in trades needed for base support at installations throughout the Army. The objective of the new Facilities Engineering Apprenticeship Program are to improve the skills of the blue-collar work force, train skilled replacements for retiring workers, and give civilian employees at lower levels more opportunities for advancement. Plans call for 1,000 apprentices in fifteen to twenty blue-collar trades. During the past year, 300 apprentices were employed in nine trades at fifty-nine Army installations in the United States. They have been registered with the Department of Labor and are required to complete an apprenticeship of three to four years before they can be certified as trained journeymen. Upon completion of training, apprentices will be assimilated into

their installation's facilities engineer work force. Another 700 apprentices will enter the program during the next two years, 300 in fiscal year 1977 and 400 in 1978.

Over the past few years, the Army has sought to follow congressional guidance on using the most economical manpower available. The civilian substitution program begun in July 1973 will have converted approximately 14,000 positions from military to civilian status by the time it is completed in December 1976, with net savings to the Army of about $21 million. As this program progressed, more soldiers became available for reassignment to military units. As a result of civilian budget restrictions and strength ceilings imposed by Congress, however, the allocation of civilian positions to field commands was reduced without a restoration of the military spaces already withdrawn in the substitution program. At the same time, total military strength also continued to decline.

Faced with annual reductions in both military and civilian personnel and a stable or growing work load, commanders have had to divert soldiers from their assigned duties to perform essential support tasks. During the report period, this so-called borrowed military manpower added up to approximately 22,500 man-months each month, a number equivalent to the manpower of four and a half combat bridgades. About 70 percent of the diversion may be acceptable because it either permits components of a unit to perform as organizational entities in functions associated with the unit's primary mission or allows soldiers to perform in areas associated with their specialties. The other 30 percent of borrowed military manpower, however, does not directly relate to unit missions or individual specialties. These diverted soldiers are used mostly in installation support activities, such as medical services, administration, supply, and general housekeeping, but they also work in military units to perform necessary peacetime tasks for which the units are not staffed.

The diversion of soldiers from their assigned duties decreases job satisfaction and reduces unit readiness, as Army leaders have consistently pointed out. It also clearly shows the interrelationship between the Army's civilian and military manpower. Neither can operate alone, each must be balanced with the other, and both are essential to the readiness of the Army.

VI. Reserve Forces

The Army National Guard of the United States and the Army Reserve have the mission of augmenting the active Army during the initial stages of war or national emergency. Their importance in national defense was recognized during the past year by the passage of Public Law 94–286. This act authorized the president to order as many as 50,000 members of the Selected Reserve to active duty for up to ninety days under conditions short of a declaration of war or national emergency.

To improve the management of the reserve components, the Army staff during the past year surveyed the functions and organization of the National Guard Bureau and the Office of the Chief of the Army Reserve. The staff took a number of actions as a result of the survey. It directed the Construction Requirements Review Committee to integrate a review of reserve components construction requirements with the active Army construction program; converted National Guard technicians who served on the Army staff to civilian pay status; discontinued service of reservists and guardsmen on the Army staff for active duty training, except for special projects; established an office of mobilization readiness and two new field operating agencies within the National Guard Bureau; and increased personnel authorizations for both the bureau and the Office of the Chief of the Army Reserve.

Force Structure

The Army National Guard (ARNG) supports the 24-division force with eight divisions. In addition, four National Guard brigades and nine separate combat battalions have a special function to round out understructured active Army divisions. During fiscal year 1976 the Army National Guard carried out a number of changes in its force structure to meet its commitment to the 24-division force and to improve command and control, training opportunities, and logistic management. The 58th and 116th Infantry Brigades, using assets present within each state's troop allotment, were activated in Maryland and Virginia, respectively. In other important changes, one armor battalion was moved to Kansas from Pennsylvania, an artillery battalion was moved to Arizona from Michigan, and a separate infantry battalion was inactivated in Illinois.

As of 30 September 1976, the Army National Guard structure included 3,300 units, an increase of forty-four over the 30 June 1975 figure. The organizations in the structure were as follows:

- 5 Infantry divisions
- 1 Mechanized infantry division
- 2 Armored divisions
- 11 Infantry brigades
- 6 Mechanized infantry brigades
- 3 Armored brigades
- 3 Armored cavalry regiments
- 2 Special Forces groups
- 136 Separate battalions
- 965 Other company- and detachment-size units

During the year the United States Army Reserve (USAR) began a three-year program to align its force structure with the requirements developed in the Army analysis. Additions to the USAR troop structure included chemical, composite services, medical, and transportation units. Inactivations included finance units, two railway transportation battalions, and one engineer battalion. The total program consisted of seventeen activations and forty-one conversions. The major changes included the reorganization of the 205th Infantry Brigade to a light infantry brigade, with a special mission assignment in Alaska. Company D of the 13th Engineer Battalion, 7th Infantry Division, was activated in the Army Reserve. Postal support to the Army was also reorganized. Twenty-two postal units were inactivated, and the remaining twenty-two were modified in size and scope.

Also inactivated, on 30 September 1976, were six Army Reserve field press censorship detachments, which had the mission of reviewing for security purposes news material intended for dissemination to the public in a theater of operations. These units, with a combined strength of eighty-two officers and fifty-two enlisted men, represented the armed forces' entire field press censorship capability. Their deletion reflected the great technological advances in communications in recent years which have rendered World War II type censorship operations impractical because of the inordinate amount of manpower that would be needed to screen vast quantities of copy, television footage, and tape recordings. In addition, since NATO allies do not have a field press censorship plan or capability, continuation of a unilateral program would be ineffective. The National Wartime Information Security Program will have to be modified to reflect this change.

As of 30 September 1976 the Army Reserve consisted of approximately 3,200 units of company and detachment size. Major organizations in the troop structure were:

- 19 U.S. Army Reserve commands
- 12 divisions (training)
- 2 maneuver area commands
- 2 engineer commands
- 1 military police command
- 1 theater army area command
- 3 civil affairs commands
- 9 maneuver training commands
- 2 infantry brigades
- 1 mechanized infantry brigade
- 3 transportation brigades
- 3 military police brigades
- 2 engineer brigades
- 3 support brigades
- 2 medical brigades
- 4 hospital centers
- 5 hospitals (1000-bed)
- 98 hospitals (miscellaneous)
- 1 IX Corps (Augmentation)
- 57 separate battalions
- 1500 other company and detachment-size units

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Personnel

The federally recognized strength of the National Guard decreased from 401,981 on 30 June 1975 to 375,706 a year later and then increased slightly to 376,141 by 30 September 1976. Paid drill strength dropped from 394,720 to 366,841 during the same fifteen-month period. The number of women increased from 6,771 to 11,146, and the number of blacks rose from 31,029 to 46,696. At the end of September 1976, there were 73,519 members of various minority groups in the Army National Guard, representing 19.5 percent of the total strength. These substantial increases in minority participation were attributed primarily to the effectiveness of the National Guard Affirmative Action Plans. Procurement of minority officers, however, continued to lag and did not keep pace with that of enlisted personnel. The ratio of new enlistments to reenlistments has changed considerably since the end of the draft. On 30 June 1974 the ratio had been 27 percent for new enlistments to 73 percent for reenlistments, but by 30 September 1976 it was 40 percent to 60 percent, respectively, well on the way toward the National Guard goal of 50 percent in each category by 1980.

Recruiting and retention continued to be high priorities for all units, with particular emphasis on quality enlistment programs. The "Try One" program, begun in fiscal year 1970, continued to help the National Guard attract trained veterans into its ranks. Since June 1971 the National Guard has recruited 1,941 experienced Army aviators upon their release from active service, thereby retaining the considerable time and money expended in their training, and helping the guard's 105 aviation units maintain their strength at or near authorized levels. In a joint recruiting effort by the Army National Guard, the Army Reserve, and the active Army at thirty-one military installations, soldiers leaving the active Army were encouraged to join their hometown guard or reserve unit.

The Army Reserve paid drill strength decreased from 225,100 to 192,000 between 30 June 1975 and 30 September 1976, and the strength of the Individual Ready Reserve fell from 355,100 to 217,600. These large losses were due primarily to the release of personnel whose service obligations had been completed. As a result of the continuing rapid decline in Army Reserve strength, the Army increased the number of recruiters and provided additional incentives for enlistment. In August 1976 the Vice Chief of Staff approved the first phase of the U.S. Army Reserve Recruiting Plan, prepared by the U.S. Army Forces Command, which reinforces the current recruiting force of 365 civilians with 654 soldiers in grade E–7. Another 349 military recruiters will be added in fiscal year 1977, and specific recommendations for solving the Individual Ready Reserve strength problem are also expected next year. Meanwhile, the Army staff, the Forces Command, and the Training and Doctrine

Command have been developing various enlistment incentives as part of the Reserve Component Readiness Improvement Package that is scheduled for fiscal year 1978.

Although total Army Reserve strength dropped sharply during fiscal year 1976, the number of enlisted women increased by 3,453 and the number of blacks by 6,065. In general, the Army Reserve made noticeable progress in the fields of race relations and equal opportunity; for instance, eighty-two troop unit members graduated from the Defense Race Relations Institute.

To provide fillers rapidly for active and reserve units scheduled for early deployment at a time of full mobilization, the Army this year adopted a voluntary mobilization preassignment program. Under this program, members of the Individual Ready Reserve and soldiers leaving active service have an opportunity to select a unit assignment in the event of mobilization. As of 30 September 1976, some 12,000 persons had volunteered under the program, and almost 8,900 of these had received preassignment orders informing them when and where to report following an announcement of full mobilization. Of the individuals leaving active service through transfer points, approximately 16 percent volunteered for preassignment. Comparisons of recruitment before and after the start of the program in March 1976 revealed no harmful effect on enlistments in other ARNG and USAR units.

During fiscal year 1976, the National Guard approved the Enlisted Objective Force Model, a management tool similar to the active Army's Enlisted Force Management Plan, for projecting long-term quantitative and qualitative manpower objectives. Similarly, the Enlisted Personnel Management System was adopted for both the National Guard and the Army Reserve. Whenever possible, the system is being implemented in the reserve components in concert with the active Army.

The Army National Guard and the Army Reserve also adopted the concept of the Officer Personnel Management System. Because the two reserve components differ from each other and from the active Army, these systems will not be the same as the active Army's Officer Personnel Management System, but they will be compatible with it. Both reserve components decided to concentrate on developing each officer in a single specialty. Only at the lieutenant colonel level will consideration be given to developing a second specialty, since by then the officer's duties will probably require more diverse skills. In the meantime, all civilian skills and qualifications will be recorded for potential use by the Army. The Army Reserve's Officer Personnel System, the test phase of the Officer Personnel Management System, proved highly successful, and it will be expanded starting in fiscal year 1977 to include the centralized manage-

ment of about 10,000 reserve officers. The effects of the two personnel management systems on the reserve components are difficult to evaluate at this time.

The conversion of Army Reserve personnel qualification records to new standard forms used by the active Army began during fiscal year 1976 and is scheduled for completion early next year. This conversion will facilitate personnel management in case of mobilization and will form the basis for future expansion into automated personnel systems support for the Army Reserve.

The Joint Uniform Military Pay System (JUMPS), which has been in effect for active duty personnel in the Army since 1971, has now been extended to include the reserve components. It is a computerized and centralized system that pays members of the Army National Guard and Army Reserve for inactive duty training. Between March and December 1975 the U.S. Army Finance and Accounting Center at Indianapolis, Indiana, converted the pay accounts of approximately 345,000 guardsmen and about 190,000 reservists located in all fifty states, Puerto Rico, the Virgin Islands, Guam, and the District of Columbia to the new system.

The requirement for Army National Guard technicians increased from 32,098 positions on 30 June 1975 to 32,144 on 30 September 1976. The authorized technican ceiling for both fiscal year 1976 and the transition quarter, however, was only 28,892, or 89.7 percent of the requirement. Actual technician strength in the guard rose from 28,831 at the end of June 1975 to 28,892 a year later and to 28,919 by the end of September 1976. The result was an average man-year rate of 99.15 percent of the authorized level.

Meanwhile, the most critical problem facing the Army Reserve's technician program continued to be inadequate funds and spaces. An Army study conducted this year to examine actual work loads in relation to the current technican force indicated that 9,998 technicians were needed for reserve units. This figure was well below the earlier Army requirement for 12,270 positions, but it was still much higher than the congressionally funded level of 8,335 man-years for fiscal year 1976 and 8,151 for fiscal year 1977. As of 30 September 1976, the actual technican strength in the Army Reserve was 8,068, as compared to 8,221 at the end of June 1975.

A special study group formed early in 1975 to analyze the ARNG and USAR officer selection and promotion systems this year recommended a substantial number of improvements. The changes proposed by the group included the installation of a selective retention program within the Army Reserve that would inhibit excessive tenure of service. A similar proposal was to limit tenure in certain USAR command and

staff positions to three years. Noting the undesirable effect of granting waivers of age requirements for initial appointments in the reserve components, the group advised that current appointment standards be maintained and that establishing more strict appointment criteria be considered. Also recommended were steps to eliminate separate selection standards for reserve component and Regular Army promotions. The group further proposed that "tombstone" promotions—those that occur immediately before retirement—be eliminated by allowing reserve component officers to be promoted only if they were able to serve at least two years before reaching mandatory removal dates. The Assistant Secretary of the Army for Manpower and Reserve Affairs approved these and most of the other study group recommendations in November 1975. By the end of September 1976, the Army had carried out a number of the approved measures and was prepared to take the remaining steps in the near future.

Equipment and Maintenance

Despite continued equipment shortages in self-propelled artillery, tactical bridges, radar, tactical radios, and other communications items, issue of equipment and inventory levels of the reserve components again registered significant gains. The value of equipment issues rose to well over $400 million, and inventory assets climbed from $3.4 to $4.1 billion. The equipment status of the reserve components in billions of dollars at the close of the extended fiscal year was as follows:

	National Guard	Army Reserve
Mobilization requirements	4.7	1.7
Training requirements	4.4	1.6
Inventory (assets)	3.0	1.1
Standard	2.7	1.1
Contingency/obsolete	.3	.010
Percent of all for training	67%	66%

After a low point in tank strength caused by withdrawals and diversions during the 1973 war in the Middle East, the reserve components began to receive significant quantities of rebuilt main battle tanks. Tanks on hand reached 57 percent of the authorized level, with 78 percent in the M60 series and the remainder in the M48 series. There were also marked increases in the reserve's stocks of crew-served weapons, engineer equipment, and wheeled vehicles.

Available aviation materiel increased as well, with the combined number of aircraft in the possession of the reserve components totaling 3,128 by the end of the year. National Guard aircraft rose from 2,428 to 2,588 (2,438 rotary wing and 150 fixed wing), and Army Reserve aircraft increased from 536 to 540. Also, the National Guard was able to provide each state with a twin-engine fixed-wing aircraft.

With more spare parts and technicians available, and through better utilization, the readiness of reserve equipment and vehicles compared favorably with other Army units. Two hundred and fifty area maintenance activities supported Army Reserve units. During the year organizational maintenance for the Army Reserve was funded at $7.9 million, and through the depot overhaul program 500 items, including aircraft, were repaired and modernized at a cost of $8.1 million.

Facilities

The Army Reserve military construction program during the period amounted to $50.3 million, an increase of $6.6 million over the fiscal year 1975 budget. Part of the increase ($2.5 million) was due exclusively to additional funding for the transition quarter. An additional $20.7 million in carry-over funds from previous years raised the amount available to $70 million. The amount actually obligated during the period was $38.4 million, and a balance of $28.3 million was carried into fiscal year 1977.

Total construction requirements for the Army Reserve amounted to $516.3 million, an increase of over 50 percent from the figure of $338.4 million at the end of fiscal year 1971. The causes of this substantial growth include (1) continuing inflation, (2) the need for more facilities to support an expanded air fleet and improved equipment inventory, and (3) increases in construction costs produced by higher construction standards. As part of a general cost reduction effort, the Army Reserve has tried to control this growth by comparing its standards for facilities with those of the National Guard. One result of this comparison was a change in existing criteria for new reserve centers. Based on the experience of twenty-nine construction contracts awarded under the new standards, there is reason to believe that some cost reduction has been achieved. Concurrently, the Army Reserve has developed standard designs for thirteen different facilities used in annual training, including headquarters and administrative accommodations, dining halls, dispensaries, and barracks. Emphasis on austerity and standardization will presumably yield additional savings.

The Army National Guard military construction program received $62.7 million in new obligational authority, of which $1.5 million was received for the transition quarter. An additional $5.7 million in carry-over funds from previous years raised the amount available to $68.4 million, an increase of $8.9 million over fiscal year 1975. The guard obligated $54.2 million over the fifteen-month period, and a balance of $11.9 million was carried into fiscal year 1977.

The guard still uses a number of armories and other facilities that are considered inadequate, chiefly because they are superannuated. The

oldest armory in service was built in 1842. Eleven percent (294) of the total were built more than half a century ago, and 33 percent (901) are more than twenty-five years old. Of the 2,740 armories, 658 are considered deficient, and replacement will cost an estimated $328 million. During the past fiscal year the guard awarded construction contracts for fifty-four new armories at a cost of $22.6 million. Contracts were also let for thirty-two administrative and logistical structures and twenty projects at field training sites at costs of $9.8 million and $15.7 million, respectively.

The National Guard Intrusion Detection System Program, begun in 1971 with a goal of protecting 4,250 arms vaults and ammunition storage facilities, is nearly complete. Installation has been started or completed at 4,015 (94.4 percent) of the vaults, at a cost of $3.7 million, and work on the remaining facilities will proceed apace.

Training and Readiness

Innovation and remedial action marked the individual and unit training of the reserve components this year. To reduce a backlog of ARNG and USAR recruits awaiting active duty to receive basic and advanced individual training, the Army in May 1976 started what was called REPTRAIN 76 at eleven Forces Command and Training and Doctrine Command installations and in thirteen military occupational specialities. For the first time in the recent past, Army Reserve training divisions joined forces with active Army units to instruct several thousand ARNG and USAR members who otherwise would not have received initial training this year. The involvement of the USAR divisions, particularly in training center management, gave them a side benefit of valuable mobilization training.

In the regular program of scheduled recruit training, the Army Reserve succeeded in training 70 percent in the first twelve months of fiscal year 1976 and 82 percent in the transitional quarter. Comparable National Guard results were 103 percent and 94 percent, respectively.

The National Guard individual training program for noncommissioned officers (NCO's) this year marked the Army's return to decentralization through what was called exported training. Under this concept, the Army canceled basic NCO courses at the service schools and established programs of instruction at various NCO academies. The National Guard received significantly larger quotas for officers attending the senior service colleges, and, for the first time, USAR officers attended resident courses of the National Defense University. Enrollment in USAR schools reached 51,483, which included 29,441 Army Reserve, 20,228 National Guard, and 1,814 active duty personnel. The total enrollment represented an increase of almost 4,000 over last year's. Most students,

about 30,800, were enrolled in Military Occupational Specialty (MOS) qualification courses, and their training helped to reduce an MOS mismatch problem in the reserve components.

Aviation training within the National Guard moved forward during the reporting period. The number of aviators qualified in terrain flying (nap-of-the-earth) techniques rose, as did the number of aviators who received an initial instrument qualification. The ARNG aircraft accident rate during the year was the lowest of any major Department of Defense component—2.79 accidents per 100,000 flying hours.

Significant activities contributing to the improved training of some reserve component units included the continuation of their affiliation for training with active Army units. In February 1976 Congress lifted the ban, imposed the year before, that restricted reserve component units with foreign area contingency missions from taking part in overseas training exercises. Though removal of the restriction occurred late in the training year, several units performed their annual training in Europe and in the Pacific. For the first time, on a very small scale, USAR units also participated in the annual REFORGER exercise.

In the United States, reserve component units and over a hundred individual reservists joined active Army units in Logex 76, a joint, two-week command post exercise conducted at Fort Pickett, Virginia, in June. Training in the fundamentals of combat support and combat service support was the objective of the exercise. The scenario of the exercise was a conventional, limited war in the Republic of Korea that involved a joint task force and included an independent U.S. corps of three divisions and a separate infantry brigade. Stressed during the exercise were command and staff procedures and joint operations conducted according to the latest logistic doctrine.

Both the National Guard and the Army Reserve began to employ a new training and evaluation guide for units. This guide, called the Army Training and Evaluation Program, makes it possible to measure unit performance against unit mission with some precision. Its partial use this year indicated its value in giving commanders thorough evaluations of their units.

Working against any great improvement in the readiness of reserve component units this year was a general decline in manpower as men who had enlisted during the war in Vietnam, some to avoid the draft, completed their service obligations. The personnel strength of the National Guard moved upward during the last two months of the period, but it was uncertain if this experience indicated a reversal of the downward trend.

Faced with a decrease in the readiness of the three major Army Reserve combat units—the separate infantry brigades—because of a lack

of qualified personnel, the Army put a brigade improvement plan into force to arrest the decline. The purpose was to reduce the recruiting competition in the geographic areas occupied by the brigades. The Army accomplished this by inactivating or relocating other units and by enlarging the recruiting areas of the brigades. At year's end, the results of these changes were incomplete.

During the year the National Guard and the Forces Command, which has authority over USAR units through the United States armies, continued a program to redistribute materiel on hand to achieve the highest possible level of logistic readiness, particularly among units earmarked for early deployment in an emergency. Yet, as of 30 September 1976, scarcely more than half of these units possessed their authorized equipment, and the serviceability rating of materiel on hand stood at 67 percent. In sum, while the logistic readiness of reserve component units advanced during the year, much more improvement was required.

To improve the state of reserve component preparedness, the Army developed a Readiness Improvement Package that addressed readiness problems requiring both one-time and sustained remedies. Particular attention fell on personnel strength and training. Recommended measures will receive further study next year, and those approved will be funded beginning in fiscal year 1978.

Support to Civil Authorities

The Army National Guard, as the state militia, has the additional mission of protecting life and property and preserving peace and order when serving under federal or state authorities. During the reporting period, more than 21,600 guardsmen responded to 232 emergencies, all in a state status.

The main National Guard involvement in these emergencies was to provide assistance to civil authorities in natural disasters and lesser situations of distress. During the fiscal year for these two categories, there were 216 call-ups in forty-seven states involving 14,605 guardsmen. Natural disasters required 102 call-ups, including 37 forest fires, 25 floods, and 19 tornadoes and hurricanes. The remaining responses were to alleviate damage from snow, ice, windstorms, and fire. Included in the 114 other emergencies were searches and rescues, traffic safety, and miscellaneous missions.

In the remaining sixteen emergencies, National Guardsmen were placed on state active duty to assist in controlling either civil disturbances or situations that could lead to civil disturbances, but in only eight instances were they committed. Of these 16, 2 were public employee

strikes, 2 were prison disorders, 2 were school busing problems, and 1 was to assist law enforcement authorities. The remainder were potential civil disturbances.

Army National Guard units with assigned civil disturbance control missions conducted annual refresher training in control operations and training evaluation. Also, 105 senior Army National Guard officers completed the civil disturbance orientation course at the U.S. Army Military Police School at Fort Gordon, Georgia.

VII. Organization and Management

Organization

Changes resulting from the Army and Army staff reorganizations of 1973 and 1974 continued throughout 1976. Financial austerity forced further reorganizations and internal realignments to reduce the size of headquarters staffs and combat support operations. Politically sensitive issues were also responsible for organization and management changes.

The dramatic increase in the Army's sale of arms to oil-rich countries in the politically and militarily volatile Midde East caused increasing congressional criticism. General Weyand visited the area to investigate the problem personally. On his return he ordered an intensive study, which led to the creation of a permanent Coordinator for Army Security Assistance under the Vice Chief of Staff on 8 October 1975. The Chief of Staff assigned to this position Maj. Gen. John A. Hoefling, formerly director of International Logistics in the Office of the Deputy Chief of Staff for Logistics.

Replacing the Army's piecemeal management of international security assistance, the new office became the center of a complex, sophisticated, and well-articulated network of relations with relevant agencies inside and outside the Army and the Department of Defense. General Hoefling worked directly with the Defense Security Assistance Agency, the Under Secretary of the Army, the Assistant Secretary for Installations and Logistics, the Army staff, and the major field commands. Corporate responsibility for policy rested with a steering group, cochaired by the Under Secretary of the Army and Vice Chief of Staff, which included representatives from all Army staff agencies and, when necessary, the major commands. The coordinator synchronized Army activities in security assistance.

In another significant change, the select committee was made paramount among Army staff committees involved in major policies and plans. When first created in March 1970, it was a forum where the Army staff could informally discuss and recommend various means of balancing Army programs more effectively with the financial resources available. Its authority was limited to areas where "major policy issues are not involved." On 29 March 1976 the Chief of Staff formally designated the committee "as the Army Staff's senior committee." It would not only coordinate, but also integrate and "make decisions on all Army policy, program, and budget matters." Its members were responsible

for anticipating critical problems, to include those related to the sale of arms abroad. A new Strategy Planning Committee, chaired by the Assistant Deputy Chief of Staff for Plans and Operations, would prepare necessary studies and recommendations for the select committee's consideration. As in the past, it met only at the call of the chairman.

The Freedom of Information Act and the Privacy Act flooded the federal government with requests to investigate its records. Army agencies, anticipating the deluge, created special branches for handling these problems. A typical example was the creation in April 1976 of the Freedom of Information/Privacy Act Branch within the Office of the Inspector General and Auditor General. This new agency was responsible for handling all requests for Inspector General records throughout the Army.

Combining the Office of Information with the Office of Public Information in the Army Secretariat in July 1976 ended an awkward arrangement created in 1955. The same officer had served as Chief of Public Information in the Army Secretariat and as Chief of Information under the Chief of Staff. The new agency, designated the Office of the Chief of Public Affairs, led to corresponding changes of titles throughout the Army. The Army's information offices now parallel those of the Navy, the Air Force, and the Office of the Secretary of Defense.

After the Army staff reorganization of 1974, The Adjutant General (TAG) was no longer responsible for military personnel management. He retained his traditional administrative responsibilities for preparing and publishing official Army publications, controlling paper work, preserving the Army's records, and operating the Army's headquarters and worldwide postal system. He also inherited a group of miscellaneous activities collectively designated as Personal Environment Systems. They included the Institute of Heraldry, casualty and cemeterial functions, retired activities, nonappropriated fund management, and morale services such as recreation and entertainment. All organizations with operational missions were grouped within a single field operating agency, The Adjutant General Center.

A functional realignment took place during 1976 to provide more effective management of these fragmented agencies. The Adjutant General's Comptroller Office assumed responsibility for financial management functions, except for automatic data processing systems. These functions include budgeting, accounting, reviewing proposed programs and their accompanying economic analyses, manpower management, and internal audit. A special division deals with the financial management of nonappropriated funds.

The Personnel and Administrative Directorate provides general staff support services, including the mailroom and word processing center.

A Plans and Operations Directorate is responsible for public affairs, legislative activities, contingency and force planning, and management improvement studies and programs. It also acts as TAG's Information Systems Office.

Within The Adjutant General Center, a Deputy Chief of Staff for Administrative Systems and a Deputy Chief of Staff for Personal Environment Systems supervise the activities of operating agencies in their own particular areas. The Administrative Management Directorate is responsible for records management activities described below and for microfilm and office equipment management and policies, including word processing centers. The Administrative Operations Directorate is responsible for all the other traditional Adjutant General's administrative functions primarily associated with the preparation, production, and processing of paper work. The Personal Affairs Directorate oversees casualty, cemeterial, and retired activities, and the Morale Support Directorate is responsible for those programs formerly managed by separate community and recreation service agencies. The Personal Environment Systems Management Office concerns itself with managing nonappropriated fund and general resources for community service and morale support programs.

Congress ordered the U.S. Postal Service during 1976 to take over postal units within the continental United States, Hawaii, and Alaska—a transfer that will eliminate approximately 350 active Army and nearly 800 reserve unit postal spaces. During changeover negotiations, the Postal Service, however, indicated it could not, for the near future, provide adequate service in certain locations involving approximately 122 positions.

Since its creation in 1962 the Army Materiel Command (AMC) underwent constant reorganizations and realignments in its headquarters and numerous field commands. These conditions reflected a more fundamental problem, chronic dissatisfaction with the Army's entire system for developing and fielding new weapons and equipment. A special Army Materiel Acquisition Review Committee on 1 April 1974 recommended sweeping organizational and management reforms. The Army staff has been monitoring these problem areas ever since. Transferring responsibility for procurement and production from the Deputy Chief of Staff for Logistics to a new Deputy Chief of Staff for Research, Development, and Acquisition was a helpful step. Another was a parallel reorganization of AMC field commands and AMC headquarters, which on 1 January 1976 became the Materiel Development and Readiness Command (DARCOM). Materiel development and materiel readiness are now the two major organizational elements within the command. The former is responsible for research and development, producer tests

and evaluation, and initial procurement of weapons and supporting equipment. The latter is responsible for buying, fielding, and maintaining these systems.

Nearly every proposed reorganization of the Army since World War II has stressed the necessity of decentralizing and shifting operations to the field, a proposal that headquarters staffs have generally resisted. The DARCOM reorganiaztion is one more attempt to decentralize operations, partly by reducing the headquarters staff. As noted earlier, the command will also split the commodity commands into separate research and development and materiel readiness commands. The reorganization will involve the transfer of some functions among various installations.

Accordingly, during fiscal year 1976 the Tank-Automotive Command became the Tank-Automotive Research and Development Command and the Tank-Automotive Materiel Readiness Command. The Missile and the Armaments Commands were similarly divided. Realignment of the Electronics, Aviation, and Troop Transport Commands may also take place.

One of the Army Materiel Command's major subcommands since its creation was the Test and Evaluation Command. Assigned to it were development test facilities of the former technical services and operational test boards of the combat arms. Placing the latter under a predominantly development command created controversy within the Army. The Materiel Acquisition Review Committee's testing team recommended transferring these operational test boards from the Materiel Command to the Training and Doctrine Command. The Department of the Army approved the recommendation on 1 July 1975 and directed the transfer of five operational test boards: the Air Defense Board at Fort Bliss, Texas; the Airborne, Communications, and Electronics Board at Fort Bragg, North Carolina; the Armor and Engineer Board at Fort Knox, Kentucky; the Field Artillery Board at Fort Sill, Oklahoma; and the Infantry Board at Fort Benning, Georgia. Later the Aviation Board at Fort Rucker, Alabama, was transferred to the Training and Doctrine Command. At the same installation the Materiel Development and Readiness Command created an Aviation Development Test Activity.

Since the Materiel Development and Readiness Command is principally responsible for producing arms sold abroad, the creation of the Coordinator for Army Security Assistance led to changes in the command's organization. In November 1975 the International Logistics Center at New Cumberland, Pennsylvania, the field agency responsible for direction of these operations in the major commodity commands, was placed under an International Logistics Command. Brig. Gen. Tom H. Brain, the director of International Logistics, DARCOM headquarters,

now wears a second hat and directs the activities of the International Logistics Center.

Continued reduction of funds and resources for the Army triggered another round of proposals, a follow-up to Project Concise begun in 1974, to close or reduce operations at various bases. How to accomplish these reductions without weakening the Army's combat effectiveness was the critical issue. In April 1976 Secretary Hoffmann announced the initiation of eighteen realignment studies. Preliminary analysis by the Army staff indicated that approval of these proposals could result in the elimination of about 3,600 civilian positions and the conversion of about 1,400 military positions to combat roles. Eliminating the civilian positions might save $42 million annually. The studies emphasized reducing the number of small, single mission installations, consolidating school activities, and streamlining storage and maintenance operations. Each study assessed alternative courses of action and evaluated the effects each would have on local communities. Several of the studies considered functions and activities which civilian contractors might perform.

One of the earliest recommendations approved was to lease some port facilities at the Marine Ocean Terminal in Oakland, California, to private industry. By late fall 1976 the Army announced decisions on five other recommendations. Two dealt with the conversion of most base operations functions to contract at Stewart Army Sub-Post, New York, and Selfridge Air National Guard Base near Detroit, Michigan. Two other decisions rejected realignment proposals for the Savanna Army Ordnance Depot in northwest Illinois and Jefferson Proving Ground in southeast Indiana. In the fifth case, the Army announced the closure of housing facilities at Schilling Manor near Fort Riley, Kansas, as the preferred alternative, with the final decision to be made following review of congressional and public comments.

Two studies involved U.S. Army Security Agency installations at Arlington Hall Station in Arlington, Virginia, and the Vint Hill Farms Station, near Warrenton, Virginia. Decisions in these cases depend upon the reorganization of the Army intelligence community discussed in Chapter IV.

Decisions on the remaining ten base realignments had not been made by the end of fiscal year 1976. The need to conserve manpower, however, will keep attention fixed on these and other base reductions in the years ahead.

The Office of Management and Budget and the Department of Defense established new policies and procedures during the year for contracting out as many of the commercial- and industrial-type activities as can be justified on the basis of cost. As a matter of policy, the Army is now required to use higher factors in estimating its costs of operating

support activities and to compare these more realistic estimates with bids submitted by contractors.

The Deputy Chief of Staff for Logistics is responsible for monitoring the Army's commercial- and industrial-type activities, of which there were 3,153 as of the end of the fiscal year. Of these, 1,574 were operated by the Army, 141 by contract, and 1,438 jointly by contractors and the Army. The capital investment was approximately $3.8 million and annual operating costs $2 million.

Management Information Systems

Computer hardware technology matured during the 1970's, but the software associated with it did not advance as rapidly. Both are expensive, although software development costs are much greater in the long run. In the current inflationary environment the Office of Management and Budget and Congress have required detailed justification for purchasing or leasing computer equipment. They have also requested, when economically practical, that government agencies contract with private industry for performing computer functions. Since the military services are by far the largest users of automatic data processing systems (ADPS), the Office of Management and Budget and Congress are understandably scrutinizing their requests for developing, acquiring, and operating automatic data processing systems.

As Director of Management Information Systems in the Office, Chief of Staff, from July 1973 to July 1976, Maj. Gen. Richard L. Harris was responsible for the restructuring of the Army's organization and management procedures for the design, purchase, and operation of automatic data processing systems.

The Army in March 1976 revised and published Army Regulation 18–1 governing the objectives, responsibilities, policies, and procedures for Army management information systems and simplified the documentation and procedures for the systems as well. The Army also decentralized control over the data processing systems, in contrast to the tight controls needed before the Army reorganizations of 1973 and 1974 when the Assistant Vice Chief of Staff was urgently developing mutually compatible systems. In other changes the Army simplified the review of the management information systems by clarifying reporting requirements, eliminating some, and by reducing the volume of computer printouts through the use of microform equipment. Further, it clarified management relationships between nontactical and tactical data systems. A final change was to establish policies and procedures for the security of automatic data processing systems and for the protection of sensitive information as required by the Privacy Act of 1974.

During fiscal year 1976 the Management Informations Systems Directorate published an inventory defining the 343 separate information systems supporting Headquarters, Department of the Army. The Computer Systems Support and Evaluation Agency began a review of the terminals used at the twelve data processing installations that support Army headquarters. Those installations, as well as Army Headquarters Information Systems offices, were incorporated into groups for the exchange of information and the resolution of problems. The Information Systems offices are responsible for the management and control of the data processing systems assigned to their respective Army staff agency. In March 1976 a Management Assessment Board conducted an evaluation of the U.S. Army Management Systems Support Agency in the Pentagon. The board made thirty-one recommendations designed to improve the agency's operating effectiveness.

Another regulation calls for a biennial review of recurring controlled management information requirements and automatic data processing products. The purpose is to eliminate unnecessary production of information, improve the effectiveness of what is produced, and reduce workload and costs.

The Army Software Conversion Center was established this past year as part of the U.S. Army Computer Systems Support and Evaluation Agency. The center will provide helpful information for saving time and money when data processing installations replace existing equipment. In a related program the Army was able to make use of $51 million worth of excess automatic data processing equipment during the year, including the transitional quarter. Improved management techniques at data processing installations saved $3.5 million. Work measurement improvements alone resulted in average savings of approximately $100,000 per installation.

One of the major tactical automatic data processing systems is the Combat Service Support System. It is a mobile system that supports the requirements of active Army divisions for administrative and logistical data. After successful tests in the 2d Armored, 1st Cavalry, and the 101st Airborne Divisions, the Assistant Secretary of the Army for Financial Management in July 1974 approved the extension of the system to all active divisions. By the end of fiscal year 1976, thirteen divisions were equipped with the new Combat Service Support System. The last three of sixteen projected divisions should receive the system next year.

The Adjutant General's Office is responsible for developing a standard computer output microfiche system as an economical alternative to the paper used by the Army's Base Operating Information System. The

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General Services Administration will purchase the required equipment and services. Initial costs are estimated at $3 million, but the system is expected to pay for itself within three years. Savings on the paper involved in the Standard Army Installation Logistics Systems, the Standard Installation/Division Personnel System, and the Standard Army Financial System are estimated at $700,000 a year.

Another program administered by The Adjutant General's Office to reduce paper work costs is the use of automated typing equipment in word processing centers. During the current year 226 new word processing centers costing $3.3 million were introduced, more than double the number (103) in 1975. One hundred forty-five spaces were eliminated at a saving of $1.6 million in personnel costs and an additional $160,000 in equipment. In setting up such new centers, however, the Army encountered difficulties caused by the rapid changes in word processing technology.

In summary, the Army in fisal year 1976 continued to improve the use and management of computers in automating its business functions.

Financial Management

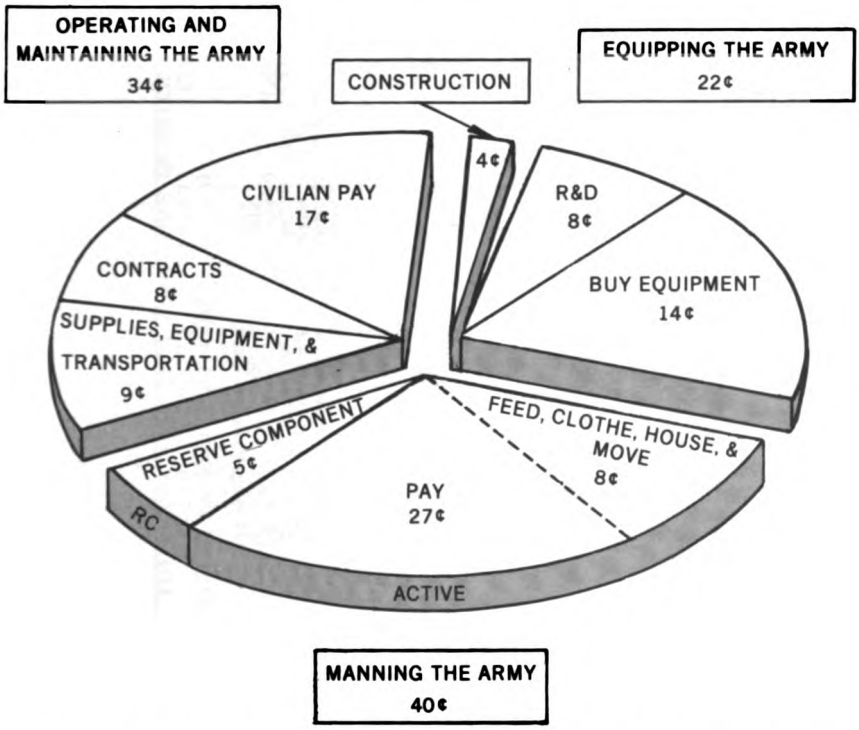
Congress authorized Army appropriations of $30 billion for the period 1 July 1975–30 September 1976. The fiscal year 1976 portion was $24 billion, an increase of 13 percent over the previous year's; half of this increase represented inflation. *Tables 2 and 3* show Army appropriations by major budget programs, which for convenience can be placed in four general categories: military manpower, equipping the Army, operation and maintenance, and military construction.

In the first category, military personnel appropriations were enough to expand combat forces to sixteen active divisions and to maintain an Army of 785,000. In the second category, Congress appropriated $3.2 billion for the development and procurement of weapons and supporting equipment, including those required by the three new divisions. Additional funds permitted replenishing stocks of equipment in the United States and overseas. Major weapons procured were the TOW (tube-launched, optically tracked, and wire-guided) and DRAGON antitank missiles, M60 tanks, and armored personnel carriers. In the case of operation and maintenance funding, inflation and budget restrictions in previous years had forced severe cutbacks in maintenance at installations and facilities serving both the active Army and the reserve components. The $8 billion appropriated this year will allow the Army to begin improving substandard maintenance conditions. In the fourth category, military construction, the budget was approximately $900 million.

Half of this was spent on military housing, hospitals, dental clinics, and community facilities on post.

Chart 1 shows how the Army's dollar was spent in these four categories in fiscal year 1976.

CHART 1—HOW THE ARMY DOLLAR WAS SPENT IN FISCAL YEAR 1976



Before Robert S. McNamara became Secretary of Defense, the Army frequently did not provide adequate justification for its budget requests. During the 1960's, however, Secretary McNamara directed the armed services to prepare detailed economic analyses to support their requests for new weapons systems and equipment, particularly expensive automatic data processing systems. He insisted that such analyses include cost-effective studies comparing alternative methods of accomplishing the same military or supporting missions. These analyses were to include not only the capital investment for developing and producing new weapons and equipment, but also the associated costs for training personnel in the operation and maintenance of them.

TABLE 2—CHRONOLOGY OF THE FISCAL YEAR 1976 BUDGET

DIRECT BUDGET PLAN (TOA)

(In millions of dollars)

Appropriation	DA Submission to OSD	Amended President's Budget	Budget Approved by Congress	Supplemental Approved by Congress	Reprograming Approved by Congress	Total Approved by Congress
Military Personnel, Army	$8,345.2	$8,264.4	$8,185.3	$254.5	$—3.7	$8,436.1
Reserve Personnel, Army	506.0	464.6	468.9	9.9		478.8
National Guard Personnel, Army	736.3	697.3	696.9		—3.8	693.1
Operation & Maintenance, Army	7,231.9	7,352.0	7,052.0	224.9	2.7	7,279.6
Army Stock Fund		94.0	20.0			20.0
Operation & Maintenance, Army Reserve	342.0	332.3	310.7	9.0	3.8	323.5
Operation & Maintenance, Army National Guard	690.8	678.2	649.9	20.8		670.7
National Board for the Promotion of Rifle Practice	.2	.2	.2			.2
Aircraft Procurement, Army	470.4	362.3	337.5			337.5
Missile Procurement, Army	462.4	460.8	426.6		—5.9	420.7
Procurement of Weapons & Tracked Combat Vehicles, Army	964.9	989.3	885.4			885.4
Procurement of Ammunition, Army	920.9	751.4	645.2		37.3	682.5
Other Procurement, Army	1,220.9	1,002.8	919.3			919.3
Research, Development, Test, & Evaluation, Army	2,376.3	2,189.4	1,956.5	9.2		1,965.7
Subtotal, excluding Construction	(24,268.3)	(23,639.0)	(22,554.5)	(528.3)	(30.4)	(23,113.2)
Military Construction, Army	1,172.3	961.9	805.7		10.2	815.9
Military Construction, Army Reserve	50.3	50.3	50.3			50.3
Military Construction, Army National Guard	62.7	62.7	62.7			62.7
Subtotal, Construction Accounts	(1,285.3)	(1,074.9)	(918.7)		(10.2)	(928.9)
Total Direct Budget Plan (TOA)	25,553.6	24,713.9	23,473.3	528.3	40.6	24,042.1

TABLE 3—CHRONOLOGY OF THE FISCAL YEAR 1976 TRANSITION QUARTER BUDGET

DIRECT BUDGET PLAN (TOA)

(In millions of dollars)

Appropriation	DA Submission to OSD	Amended President's Budget	Budget Approved by Congress	Supplemental Approved by Congress	Reprograming Approved by Congress	Total Approved by Congress
Military Personnel, Army	$2,137.3	$2,100.0	$2,066.1	$88.3		$2,154.4
Reserve Personnel, Army	184.1	168.9	165.3	3.2		168.5
National Guard Personnel, Army	229.7	225.3	209.1	7.0		216.0
Operation & Maintenance, Army	1,862.9	1,883.7	1,779.0	92.4		1,871.4
Operation & Maintenance, Army Reserve	109.7	98.2	91.1	4.0		95.1
Operation & Maintenance, Army National Guard	188.5	183.4	173.3	9.4		182.7
National Board for the Promotion of Rifle Practice	.072	.073	.093	.002		.095
Aircraft Procurement, Army	87.3	59.4	59.4			59.4
Missile Procurement, Army	138.3	56.5	42.6			42.6
Procurement of Weapons & Tracked Combat Vehicles, Army	328.8	282.3	255.0			255.0
Procurement of Ammunition, Army	269.5	271.2	252.8			252.8
Other Procurement, Army	387.1	197.7	197.7			197.7
Research, Development, Test, & Evaluation, Army	621.6	585.6	504.5	3.2		507.7
Subtotal, excluding Construction	(6,544.8)	(6,133.3)	(5,795.9)	(207.4)		(6,003.3)
Military Construction, Army	35.5	37.1	37.1			37.1
Military Construction, Army Reserve	2.5	2.5	2.5			2.5
Military Construction, Army National Guard	1.5	1.5	1.5			1.5
Subtotal, Construction Accounts	(39.5)	(41.1)	(41.1)			(41.1)
Total Direct Budget Plan (TOA)	6,584.3	6,153.4	5,837.0	207.4		6,044.4

Over the past decade the Army gradually improved its methods for justifying acquisition of new weapons systems. The same was true of requests for automatic data processing equipment and other major capital investments and for comparing Army costs with potential contracts with private industry. The Army was weakest in program evaluation; that is, justifying and analyzing the costs of current programs. In some cases, there was no justification provided for costs associated with operation and maintenance (OMA) budget programs.

There were two principal reasons for these inadequate analyses. One was the low priority assigned to such economic analyses and program evaluation by the Army staff and major field commanders. The second was the shortage of economic analysts trained to prepare the sophisticated studies required. Those with the proper training and experience were generally placed in higher headquarters. Those at the installation level, where much of the money is spent, often lacked the necessary education.

The Comptroller's Cost Analysis Directorate is responsible for monitoring and reviewing the Army's economic analysis program. After examining the problems outlined above, this office wrote directives and regulations expressing in relatively simple terms the minimum essential elements required for a proper economic analysis. Army budget directives now include a requirement that appropriation and program directors in Army staff agencies and major commands make certain that properly prepared economic analyses accompany all budget requests. The Cost Analysis Directorate has no authority to approve or disapprove these budget requests. Its responsibility is to review the work done by economic analysts to determine whether they contain the essential elements required.

During the year, life-cycle cost estimates became more important in the acquisition of major Army materiel systems. The Cost Analysis Directorate prepared guides stating the essential standards for documenting these estimates. Their instructions called for uniform cost structures, cost elements, and definitions throughout the Army. In a simplified manner they also sought to illustrate the generic terms employed in estimating the research, development, capital investment, and operation and maintenance costs of any materiel system's life cycle.

Every year military pay raises and inflation have made it necessary to completely revise the unit cost structures of the Army Force Cost Information System. A major improvement in the system's data processing equipment now allows additions to or subtractions from its data bank without reworking the entire program. A second improvement permits computing the cost of equipment in constant rather than current dollars. Another change begun this year will estimate costs of thirteen proposed

weapons systems as if they already existed in combat units. Responsible planners will be able to incorporate such costs in evaluating their projects.

The Anti-Deficiency Act (31 U.S.C. 665) holds Army officials responsible for obligating or spending more funds than Congress appropriated for particular budget categories and subcategories. Other violations occur when funds spent exceed administrative limitations imposed on their use. Frequently Defense or Army directives also require permission from higher authority if obligations or expenditures on particular projects exceed a specified amount. Inflation in recent years has driven initial cost estimates above such limitations. Possible violations reported during fiscal year 1976 were double those for fiscal year 1975. Many of these involved minor construction projects.

To prevent such violations in the future, the Army now requires tighter auditing of accounts and publicizes the types of violations encountered. Financial management courses have been revised to include instruction on various types of fund limitations in simple, graphic terms for the benefit of managers at the installation level where most of the violations have occurred.

The Army's Standard Finance System (STANFINS), an automated system used by installations to perfrom standardized financial and accounting functions for appropriated funds, expedites the processing and reporting of disbursement and collection transactions at all levels through the Finance and Accounting Center in Indianapolis. Developed in 1970 as part of the Army's Base Operating Information System, the Standard Finance System is now in operation at 54 installations, 6 of which were added in fiscal year 1976, and in 8 major commands. It provides data used in planning, programing, and budgeting and also feeds accounting data to other services and to Defense agencies in the Washington area. During the year STANFINS data was transferred to microfiche, and an enormous amount of paper was saved.

The Department of the Army Management Review and Improvement Program was reexamined to insure that only those management improvement programs that pay dividends are promoted. This led to the establishment of an Army-wide Productivity Improvement Program to achieve the most in productivity growth and improve resource management. Responsibility for this program was assigned to the Office of Management Practices, Comptroller of the Army.

To help offset the pressures of declining military appropriations, the Department of Defense assigned a 2 percent productivity increase as the Army goal for fiscal year 1976. This goal was achieved in those areas where it was possible to establish a basis for measuring productivity. To increase efficiency further, the Army's productivity measure-

ment was expanded to cover 19 percent of the military and 63 percent of its civilian work forces.

The Value Engineering Program contributes substantial dollar savings. Existing as a formal program in five major Army commands, it is concerned with the elimination or modification of anything that adds cost to an item, process, or procedure, but which is not necessary to its basic function. For example, at one ammunition plant, a threaded, metal plug used in the production of 105-mm. shells was replaced by an unthreaded, plastic plug for a first-year saving of $977,000. Within the five affected commands, sixty-nine value engineers work full time. Savings in 1976 from value engineering was $122.9 million, $16.5 million of which was derived from civilian contratcors participating in the Army's program. Value engineering techniques have been increasingly successful in the areas of research and development, procurement, production, construction, and maintenance.

Recognizing that new and improved capital equipment contributes between 40 and 60 percent of the productivity increase in the private sector, the Army started the Quick Return on Investment Program in 1974 to expedite the aquisition of selected equipment. Previously, capital investment opportunities had been lost because of long administrative delays encountered in the normal budget review process and competition from higher priority requirements. With this program, the Army has a streamlined method of obtaining investment funds for equipment and the prospect that it will pay for itself within two years after installation. From 1974 through September 1976 approximately $12 million worth of equipment was procured with the cost of items ranging from $1,000 to $100,000. Savings derived from the Quick Return on Investment Program have been used to meet other previously unfunded requirements at the installation level. The current annual return on investment for this program is approximately 160 percent and is expected to continue at this rate. Cumulative annual savings through this year were $19 million.

Records Management

Despite the efforts of the Army to reduce the amount of paper work generated each year, staggering quantities continue to accumulate. The control, storage, disposition, and, in many cases, declassification of these records demand constant attention from records managers at all levels. During the past year the Army took a number of actions to strengthen its overall control of the linear miles of records produced since World War II.

One step was the establishment of The Adjutant General's Record Management Committee in April 1976. Chaired by the chief of the Records Management Division, the committee provides supervision and coordination of all aspects of the records management program.

Another was a broad-gauged survey of over a hundred linear miles of records in the major Army commands by records management staff members. The main objective of the survey was to investigate management practices, the use of equipment and supplies, disposition and maintenance procedures, declassification programs, the effect of the Freedom of Information and Privacy Acts, and the use of word processing and micrographics in the field. Among the major problems uncovered by survey members was a tendency of the major command staff officials to divert their records managers to administrative and clerical duties. In these circumstances, they were unable to fulfill their primary roles. The survey also revealed that numerous requests submitted under the Freedom of Information and Privacy Acts occupied a considerable amount of the records manager's time.

In the areas of records retirement and retention, the Army offered 45,000 linear feet to the National Archives; the bulk of this group consisted of files in the Washington National Records Center. Records management officials also carried out further analyses of the file series now considered as permanent in an effort to reduce the number in this category. If time limits can be placed on the retention of more types of records, problems of control, space, and administration can be greatly lessened.

A further means to save personnel and space was through the increased use of micrographics, a process which can reduce thousands of pages to a few small reels or cards. During the year, the Army provided training in micrographics to over three hunded people. At the Army Finance Center, thirty-four jobs were eliminated and an annual savings of $300,000 resulted from the use of the technique. Conversion to microfiche of 1.3 million case-documents of the Armed Forces Institute of Pathology led to the retrieval of 2,500 square feet of critical space; in addition, the move improved administration of the files and permitted pathology researchers to have multiple access to the records.

In January 1976, a two-year program got under way to put official military personnel files on microfiche. As people are separated from the Army, their official microfiche file will be matched with their records jackets and their health records; the packet will then be retired to the National Archives and Records Service. Thus far, the new procedure has caused some difficulty, and interim arrangements had to be reached with the National Archives. A final agreement will be made after the Army decides whether the records jacket is to be changed or eliminated.

Another project to improve the administration of personnel files involved several Army agencies. At the U.S. Army Enlisted Records and Evaluation Center at Fort Benjamin Harrison, Indiana, there were about 125,000 partial records containing official documents of servicemen whose status was then unknown. In May 1975 the U.S. Army Reserve Com-

ponents Personnel and Administration Center at St. Louis agreed to accept a sample of 3,000 of these records to determine where they should be retained. As it turned out, the sample was representative of the group. By the end of the report year the Army had examined over 72,000 of these records, using both visual and computer-tape checks. The results showed that slightly more than 56 percent concerned persons who had been discharged and whose records belonged in the National Personnel Records Center of the General Services Administration; about 43 percent pertained to soldiers who still had statutory service obligations and, therefore, should be held by the Reserve Components Personnel and Administration Center; and less than half of one percent applied to personnel on active duty and belonged at Fort Benjamin Harrison. The relocation of these files at their proper sites and the separation of unobligated, obligated, and active duty records were major improvements in records holdings.

Although the war in Vietnam is several years past, the last segments of the records from that area did not arrive in Washington until this year. The Vietnam records now total about 32,000 linear feet and are kept at the Washington National Records Center.

In Thailand, a records crisis arose when Thai resistance to the presence of U.S. forces resulted in the imposition of a March 1976 deadline for the withdrawal of all troops. Since the Army had responsibility for all joint records in Thailand, an urgent program went into effect to evacuate them before the deadline. The plan called for processing and shipping the records first to Hawaii, where they would be screened; those to be retained would then be sent to Washington to be inventoried and transferred to the National Records Center. The Thailand Records Retrieval Team set up to carry out this task managed to process and ship out 2,000 linear feet by the end of the year and an additional 4,000 before the deadline approached. Fortunately, the Thai government granted the United States a four-month extension in March to complete its withdrawal. When the team finally departed in July, it had handled about 9,000 linear feet, some of which had been flown out by helicopter. By the end of the fiscal year, some 6,000 feet had reached Washington and about half of this total had been processed, inventoried, and transferred to the Washington National Records Center; another year will probably be required to handle the remaining Thai records.

A problem in storage space came up in April 1975, when the General Services Administration ordered the Army to close its records depository at Neosho, Missouri, on the grounds that it was not cost effective. Although the Army was able to relocate most of the records at Neosho in other depositories, it could not find room for the Army Finance and Accounting Center records. When the Veterans Administration took over

the Neosho facility, the Army had to work out an arrangement for retention of the finance files at the site on a prorated cost basis.

For several years, the Army, along with other government agencies, has been reviewing and declassifying as many of its voluminous records as possible. The task became more difficult during the past year because of reductions in the funds available to hire reserve personnel to carry out this time-consuming process. Accordingly, in April 1976 the Army reached an agreement with the National Archives under which the latter would perform the initial declassification review of Army documents in its possession. The Army declassification staff would then review all doubtful cases and prepare for the Secretary of the Army lists of documents to be excluded from declassification. Some idea of the volume in the exempted category may be drawn from the decision of the Secretary of the Army in December to continue classification of 11,000 documents, thirty or more years old, until a specified future date; most of the documents related to intelligence, cryptography, or operational plans relevant to current international affairs. Over 6,000 linear feet of records covering the 1946–54 period went through the review process, and, to date, over 30,000 of the 51,000 feet in this group have now been declassified. In May the Army launched a project to identify the volume of records in the 1955–64 decade, so that permanent retention and declassification schedules for documents to be retained more than thirty years may be considered. Thus far, the surveyors have identified over 20,000 linear feet at the Washington National Records Center that will require declassification review.

With more and more Army archival material declassified and now available to the public, and amendments to the Freedom of Information Act further easing public access to the records, the work load of requests steadily increased. Freedom of Information Act totals came to well over 18,700 for the fifteen months of fiscal year 1976, or well over 3,700 per quarter. By way of comparison, only 2,300 requests came in from mid-February to the end of June 1975.

In a related area, the Privacy Act of 1974 also imposed a heavier burden upon records management personnel. Although Army Regulation 340–21 became effective in September 1975 and included three hundred systems of records in use by the Army, by November it became apparent that not all systems were covered. An Army review led to publishing notices of two hundred more systems in the *Federal Register,* as required by law.

The Secretary of the Army established a Privacy Review Board to act on his behalf on requests for further review of any initial refusals to amend the records. Statistically, the first report, covering the September–December 1975 period, indicated that the Army received over 10,500

requests to determine the existence of records, 13,000 for access to records, and over 9,600 for amendment of records. There were no denials, appeals, or court actions.

Since all services are affected by the Privacy Act, the Interservice Training Review Organization has requested that they develop a joint curricula training program. When this is completed, all Defense personnel will be apprised of their responsibilities under the act.

To sum up, the Army has made some advances in the struggle to control the flood of documents in production, to establish stricter standards for permanent retention, and to make the records of the past more accessible to the public. Much, however, still remains to be done.

VIII. Logistics

The Army developed its fiscal year 1976 budget at a time when the lingering effects of the Vietnam War, the telling lessons of the 1973 Arab-Israeli War, the heavy weight of inflation, and the disarming influences of peacetime conditions were all being felt. The huge quantities of equipment and supplies that had been transferred to the South Vietnamese upon U.S. withdrawal from Southeast Asia had been amassed to a great extent at the expense of departing American units. Further demands had been levied upon U.S. stocks at home and abroad to help Israel counter a major Arab assault, and the effective performance of Russian weaponry in Arab hands held serious implications for Western nations across the military board. Inflationary pressures of global spread inhibited government operations in every field of activity, and an absence of war offered inviting opportunities to defer to economic pressures by lightening the national security load. But no nation exists in a vacuum, and countering the temptations to relax were the hard realities of global tensions and the widespread Soviet threat, as well as the imperative that no military force can stand still.

In the 1976 fiscal year the Army requested appropriations equal to 6 percent of the Federal budget and 24 percent of the Defense budget to stabilize the Army while shaping it, at least for the near term, into the "16-and-8" division force outlined in Chapter II. Woven into the pattern were continuing actions to increase combat power and readiness within the 785,000 strength set for the ground forces and strong representations for the congressional funding and manning stability that would make it possible to maintain a cohesive force and balance peacetime efficiency with wartime effectiveness.

Keeping the Army housed, fed, supplied, equipped, and maintained is a logistic undertaking of the first magnitude, for the logistic function embraces numerous activities in the fields of management, production, procurement, maintenance, transportation, construction, and facilities. In 1976 the Army had to coordinate the availability of arms with the availability of new combat people, replace materiel lost through diversions to allies, continue to modernize the total force as well as equip three new divisions being organized within overall strength, modernize the ammunition production base, assess and improve the responsiveness to military needs of the nation's industrial base, modify materiel acquisition procedures, adjust troop stationing assignments to meet housing limitations

and maneuver requirements, and maintain an effective force despite the sweeping adverse effects of inflation. Taking note of "spiralling inflation and constant underfunding," Secretary of the Army Howard H. Callaway stressed in his 1976 budget presentation to the Senate Appropriations Subcommittee that "we have not been disbursing plenty, we have been distributing scarcity." This chapter discusses some of the details of logistic operations through the year.

Logistic Force Structure

Force planning, a continuing activity in the military services, is as important in logistics as it is in operations. The logistic force structure as well as the combat elements must keep abreast of organizational and technological developments, and logistic requirements are constantly measured against the changing Army force level. This year for the first time the U.S. Army Logislatics Evaluation Agency used simulation and gaming methods to analyze the total Army force, deduce the proper quantity and mixture of logistic units, and detect inadequacies in future combat support capability. Deficiencies were identified in the 1978–82 five-year total force analysis and addressed in the 1979–83 review Logistic force structure doctrine was modified to conform to anticipated requirements.

Logistic Planning and Management

Numerous planning and management techniques, procedures, and programs are required to insure that an organization the size of the Army is run efficiently. The plans and programs through which the procedures and techniques are brought into play are comprehensive in Army application and often extend into the joint services realm, for the Army is only one element of the nation's defense structure.

In September 1975, for example, the Army established a Planning Factors Management Office at Fort Lee, Virginia, to collect data and develop standard resupply planning factors, and in September 1976 the Joint Chiefs of Staff directed that the Army and the other services provide approved logistic factors annually for inclusion in the Joint Strategic Capabilities Plan. The senior logisticians of the Army Logistics Policy Council had already met in April 1976 at Fort Lee to be briefed on selected logistic topics and had published classified proceedings in which certain actions were assigned to elements of the departmental staff.

One of the essential elements of the Army's logistic operations is the Logistics System Master Plan, which provides for central control through a process of management by objectives. This year's objectives were published in July 1976; those for 1977 will be refined so that they can be integrated into the Department of the Army programing system.

The success of programming and master planning is dependent today to a large degree upon standardization of data elements. The Army uses data elements in such areas as general and financial administration, mobilization and forces, personnel, logistics, medicine, procurement, research and development, intelligence, and security. Within the past eighteen months, some 800 Army data elements and items were standardized. The U.S. Army Materiel Development and Readiness Command was designated as executive agent for the Deputy Chief of Staff for Logistics. A handbook will be issued in early 1977 to implement the standardization program and insure its compatibility with the overall Defense program.

The importance of standardization is evident in the Army's master data file which contains basic logistic data on nearly one million items of supply. The file must be kept current and be made available to users, who in some cases have automated equipment. Updated information is furnished monthly, with tapes for users with automated equipment and microfiche for the remainder.

Army logistic support extends from internal to interservice and international levels. Internally during the year, the logistic organization of the division was examined in light of logistic support changes at higher levels and of the sixteen-division force objective; the existing division support command was found to be the most effective structure for providing combat service support. Corps support command roundout was also studied against the concept that reserve component logistic units will be used to fill out active Army support commands in an emergency. This examination was continuing as the year closed.

In the area of interservice support, attention centered upon reducing support where the Army is not the principal user. In the Western Pacific, for example, the Army, with only 23 percent of the service population, was providing 93 percent of the logistic and community support. To reduce its support effort, especially in Japan and Okinawa, the Army prepared a plan to transfer twenty-eight functions and 1,200 foreign national indirect hire civilians and 580 military people on Okinawa and Honshu to other services and agencies. The plan was approved by the Department of Defense on 16 August 1976, and most of the function transfers will be completed before June 1977.

At the international level, the Army had, before 1974, provided materiel support to selected allies who were economically unable to establish contingency stockpiles. In December 1974 the Congress prohibited the services from using Defense funds to establish or maintain stockpiles identified for use by allies (Section 514, Foreign Assistance Act). In June 1976, however, the Congress removed this proscription, although with certain limitations: stockpiles in non-North Atlantic

Treaty Organization countries must conform to annual ceilings specified by Congress; new stockpiles must be on U.S. bases or bases used principally by U.S. forces; and annual increases must be reported by the president to the Congress. Within these limitations it became possible once again to develop and maintain contingency stockpiles for use by selected allies in situations favorable to the national interest.

Because of worldwide troop deployment and interservice and international support responsibilities, Army managerial expertise is constantly tested across the full range of logistic operations. In no area is the challenge sharper or more comprehensive than that of ammunition supply. During the year staff and regulatory agency inspectors at Defense and Army levels visited U.S. ammunition facilities around the world to appraise their adequacy and check upon explosives safety, physical security, surveillance, maintenance, demilitarization, equipment, and personnel qualifications. The U.S. Army Materiel Development and Readiness Command's Ammunition Center at Savanna, Illinois, was designated to survey and review ammunition operations on behalf of the Department of the Army in accordance with Army Regulation 700–13 and, as the year closed, was preparing a schedule of visits to various commands starting with Korea in December 1976.

Deciding where Army elements are to be stationed and what facilities they require has not only military but also broad political and economic implications. The Army's network of installations evolved over the course of the nation's history and was especially affected by the mobilizations of World Wars I and II. Installation populations expand and contract during emergencies and are influenced by changes in Army strength and organization even in peacetime. The last comprehensive review of Army installations in the United States occurred in 1973. In 1976 the Secretary of Defense directed that a long-range plan be developed to identify bases that the services will need in the United States in the next twenty years, so that they will be protected from commercial encroachment and earmarked for further investment. The Deputy Chief of Staff for Logistics was directed to prepare a summary of events since 1969 in the logistic area, including installation closures and consolidations as well as changes in command structure, that had had a measurable impact upon the support structure.

Logistic Systems

If any single word characterized developments in the field of logistic systems at the three-quarter point of the twentieth century, that word would be "standardization." A number of systems with standardization as their aim were in various stages of development during 1976, with progress marked by refinement rather than by the completion of

major phases. This was true of the Standard Army Ammunition System, which continued to provide automated support of theater-level Class V management in both major overseas theaters; of the Standard Army Maintenance System, within which development of the detailed functional system requirement proceeded; and of the Direct Support Unit Standard Supply System, where modifications were in progress to accommodate both divisional and nondivisional direct support supply functions.

The Standard Property Book System, designed to handle many property accountability functions by computer, was refined in 1976 to the extent that all legal requirements for accountability were met. The system passed its system integration test, a verification of correct interaction with other computerized systems.

In the report year the Standard Army Intermediate Level Supply Subsystem, which encompasses all logistic support operations between the wholesale system in the continental United States and the direct support and user levels in the United States and overseas, was extended to Forts Belvoir, Eustis, Lewis, McClellan, Meade, and Riley. It is now operational at twenty-seven of the thirty-six installations scheduled to receive it. As the transition quarter ended, extension of the system to Europe began with the 2d Corps Support Command of VII Corps in Germany. An expanded version of this subsystem was also under development, and the storage operations modules element was installed in the U.S. Army Medical Command, Europe, in May 1976.

Concept development was begun during the fall of 1975 on a Wartime Standard Support System for Foreign Armed Forces. Under this system, the United States would provide materiel support that friendly nations could not produce themselves or acquire through peacetime arrangements with other nations. The requirements would be negotiated between the foreign country and the United States and incorporated in a contingency plan that would become operational upon congressional approval. During the fiscal year, regulations were drafted and staffed within the Army, and coordination was begun with the Joint Chiefs of Staff concerning enabling legislation.

There were several developments during the report period in the U.S. Army Materiel Development and Readiness Command's five-year Automatic Data Processing Program, as well as progress in the commodity command, depot, and international logistic systems. The Commodity Command Standard System was placed in operation at the U.S. Army Electronics Command in November 1975 and at the U.S. Army Armament Command in March 1976. The Department of Defense Maintenance and Cost Accounting System was introduced at a number of Army depots, and the Centralized Integrated System for International

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Logistics was placed in operation at the U.S. Army International Logistics Command and at national inventory control points.

The Total Army Equipment Distribution Program (TAEDP) moved forward with the assignment of responsibilities on the Army staff to complete a comprehensive system that will insure effective equipment management, improve unit readiness, and provide a detailed projection of equipment distribution down to the unit level within all Army components. At the close of the reporting period, a study advisory group had been formed to coordinate and monitor the actions that will be taken to complete the program.

Materiel Maintenance

Maintenance is just as essential to total force readiness as research, development, training, and procurement. How effective the Army is depends to a great extent upon how well its facilities and equipment are maintained. The starting point for the whole process is funding.

In the 1976 budget presentations to the Congress, the Secretary of the Army spoke of the adverse effects of insufficient funds and inflation upon the operation and maintenance of the Army. Mr. Callaway noted that "1975 funding shortages will cause us to begin fiscal year 1976 at a disadvantage, while inflation will almost certainly strain our capabilities even further." He pointed to a "huge backlog of equipment to be overhauled" and noted that "the annual shortfall in resources for upkeep and repair of facilities continues to be a source of grave concern."

The backlog of unfinanced maintenance increased substantially in 1976. The rise was primarily attributable to inadequate funds for repairing real property, although conscious efforts throughout the Army to identify maintenance requirements also contributed to the backlog.

Backlog is intensively managed at all levels of command. Facilities engineers regularly inspect their installations to update conditions; the responsible major command and the departmental headquarters then validate the listings by statistical sampling to insure accuracy and uniform application of standards. Thus the management of backlog has progressed from a status of "poor visibility, little reliability" in 1974 to a carefully controlled program of identification and validation. Against this background, the operation and maintenance backlog as of 30 June 1976 was $538 million; by the close of the transition quarter on 30 September 1976, the figure had increased to $1.19 billion.

The Army's best efforts have gone into improving depot maintenance management. In the report period a system was developed incorporating data for total depot planning, including supply, maintenance, and base operations. Depot profiles were developed to assess capacity utilization in Army vehicle and aeronautical maintenance facilities. Budget docu-

mentation forms were centralized and automated, and depot maintenance master plans were prepared covering a five-year span. Industrial surveys of organic depot maintenance facilities were instituted to improve installation effectiveness, and an interservice support organization was established in the U.S. Army Materiel Development and Readiness Command to improve support in this area.

Recent emphasis on construction that would enhance career attractiveness for the soldier—troop housing, medical facilities, community accommodations—has lowered priorities for maintenance facilities. To focus attention upon the need for investment in maintenance facilities, the departmental headquarters canvassed the Army in 1973 for a comprehensive report on maintenance facilities requirements. Replies identified a need for a $933 million expenditure to replace outdated World War II facilities as well as to compensate for outright shortages. The Committee on Appropriations in its report to the 92d Congress confirmed the requirement. Since that time, with shifts in the Army's stationing installations plan and reorganizations, the worldwide maintenance facilities requirements have been reevaluated. The revised estimate of $1 billion has been included in the 1978–82 Program Objective Memorandum, a submission that includes a Corps of Engineers funding schedule to systematically reduce the shortage.

During the year the Army Logistics Evaluation Agency studied ways to improve mutual maintenance support between the active Army and the reserve components. The study, conducted between January and August 1976, revealed a potential for considerable savings of money and man-hours through increased use of intraservice support agreements.

Along another line, the U.S. Army Training and Doctrine Command developed a logistic support concept for general support maintenance within the corps. It emphasizes combat-oriented support procedures and organizes the maintenance unit around specific items of equipment. For example, all general support maintenance in the corps for armored vehicles would be done by one general support maintenance unit. The concept will be tested during 1977 and 1978.

In 1971 the Army started phased maintenance for each mission/design/series aircraft system based on condition rather than calendar time or flying hours. The project test, titled Inspect, was completed this year, and phased maintenance was begun on the UH–1 and CH–47 helicopters; remaining aircraft were scheduled on a system-by-system basis through 1978. The technique increases aircraft availability and operational readiness and decreases maintenance time and spare parts consumption.

In light of its Vietnam experience, the Army changed aviation maintenance from five to three levels. An integrated direct support capability—Aviation Unit Maintenance—was established at company level to

provide responsive mission support. Direct and general maintenance support levels were consolidated into one intermediate level—Aviation Intermediate Maintenance—to provide support in the division and Army areas. Depot level maintenance remains essentially the same. The concept was instituted in Europe, Korea, Alaska, and Hawaii. Introduction into active Army and reserve component units in the United States will be phased.

At the turn of the 1975 fiscal year, a Hospital Equipment Maintenance System prototype, a semiautomated management information system to support the preventive maintenance program for equipment installed in hospitals, was tested at the Dwight D. Eisenhower Memorial Hospital at Fort Gordon, Georgia. The concept of scheduling recurring maintenance was extended to other than hospital equipment, in fact to all facilities engineering equipment maintenance. The system was appropriately renamed Facilities Engineering Equipment Maintenance System.

Supply Management and Depot Operations

Much of the materiel that flows through the Army depot system is financed by the Army Stock Fund, a revolving fund established to finance inventories of supplies and other stores and to provide working capital for industrial-type activities. The fund is replenished through annual appropriations incorporated in the Army's budget.

Stock fund obligations in the first twelve months of fiscal year 1976 totaled $3.7 billion to support $3.7 billion in net sales. Obligations were $0.1 billion above the previous year, and sales were $0.3 billion higher. Insofar as the transition quarter is concerned, demands and sales estimated at an annual rate were higher than those in 1976, while obligations were lower as a result of review and cancellations of some materiel orders.

Inflation has produced an annual rise in the cost of materiel. In an attempt to stabilize prices, a 15 percent surcharge was added to the standard prices of all categories except subsistence, clothing, medical materiel, and petroleum products. Despite this attempt to correct imbalances, a serious liquidity problem marked stock fund operations during the first eight months of the year. Cash advances against future billings and a campaign to secure payments of accounts receivable led to an improvement in cash flow and cash balance in the last half of the report period.

The Army was authorized to obligate approximately $304 million of the procurement appropriation for secondary items in 1976 as opposed to $277 million obligated in the previous year. Users returned about 20 percent more parts and assemblies in 1976 than in 1975. In the transition quarter $48 million in obligational authority was used and $157 million in materiel was returned.

In December 1975 the Army placed a moratorium on turning in to property disposal officers excess items owned by the Army but managed by the General Services Administration or the Defense Supply Agency. This was done to preclude the loss of materiel that might be needed elsewhere in the Army. Also, procedures were developed for returning excess items to certain Army depots to be redistributed to meet the needs of other Army users.

To improve supply support to U.S. Army, Europe, and Seventh Army and reduce shipping time, the Army in January 1976 asked the Defense Supply Agency to move certain stocks to the New Cumberland Army Depot in Pennsylvania. The agency, in turn, recommended an appropriate stockage range for the small, fast-moving items the Army identifies as important to the readiness of forces in Europe. The stock relocation will be completed by February 1977.

Transportation

Army transportation uses all types of conveyance (vehicle, rail, ship, plane), carrying all categories of cargo (passengers, equipment, supplies), in all kinds of situations (peacetime, contingency, wartime). Out of the routine that involves all of these elements, a number of activities occurred during the report period that are worthy of mention.

In the area of passenger travel, a ruling by an administrative law judge in October 1975 challenged the legality of Category Y tariffs. These are the special procurement arrangements that allow the Department of Defense to purchase blocks of seats on regularly scheduled commercial flights to move military personnel and their dependents. It is an option that allows Defense-sponsored passengers to receive the same standard airlift service provided to the general public but at the less costly planeload charter rate. Operationally, it offers greater travel flexibility, since the block seating arrangement, in place of the normal planeload charter, increases the number and frequency of flights that Defense-sponsored passengers may use. Continuation of Category Y flights is contingent upon action by the Civil Aeronautics Board. Should that be unfavorable, it is anticipated that the Department of Defense would ask the Chief Executive to intervene.

To improve airlift for military personnel making a permanent change of station, the Army asked Defense to restrict the use of cargo aircraft for scheduled passenger movements. Previously the Military Airlift Command (MAC) had substituted C–141 cargo aircraft, with limited passenger accommodation, for the chartered commercial aircraft normally used on scheduled passenger routes. While this substitution benefited command operations, it eroded the service provided to Army-sponsored passengers. Following the Army request, a policy was established

whereby the Military Airlift Command may substitute cargo aircraft for passenger movement only with advance agreement by the service sponsoring the airlift.

In a review of MAC passenger operations, the Defense Department's Audit Operations Office expressed the view that substantial savings would be possible if the military services eliminated intermediary passenger reservation service and permitted installations within the United States to deal directly with the MAC Passenger Reservation Center. A six-month test was established for passenger traffic overseas. Fort Hood, Texas, Fort Jackson, South Carolina, Fort Lewis, Washington, Fort Sill, Oklahoma, and the U.S. Army Service Center for the Armed Forces in the Pentagon were selected as the Army's participants. The test was highly successful; the time required to process reservations was markedly reduced and operational flexibility was improved. The Army recommended that the procedure be applied throughout the United States, with the Military Traffic Management Command to continue to perform its traffic management function for outbound Army traffic. The expansion will begin in the coming year.

The Defense Department also directed that the Military Airlift Command test the feasibility of flights between Philadelphia's commercial airport and air terminals in Spain and Italy. A nine-month test began in February 1975 with MAC planes flying from Philadelphia to the U.S. airbase at Torrejon, Spain, the Naval Air Facility in Naples, Italy, and the Aviano Air Base in northeastern Italy. The test was successful, and permanent military airlift service between Philadelphia and the Mediterranean area was recommended.

Several developments during the report period concerned the movement of personal property of military members and their families. One was an effort to develop a Defense automated personal property system. Another was to amend the joint travel regulations to permit military personnel to move their goods by rented or privately owned vehicles and, as an incentive, share the savings over commercial movement. The Army tested this method, though without the incentive provision, at six installations, for a saving of $145,207 on 498 shipments in an eleven-month period. In the four-month period from 1 June to 30 September 1976, with 672 "do-it-yourself" shipments, the Army saved $190,807 and military members received incentive payments of $115,752. Seventy-seven percent of the shipments were made by persons in grade E–4 to E–7; they collected 70 percent of the funds paid as an incentive.

Coupled with these actions in the household goods shipment field, the Military Traffic Management Command, in coordination with the military services, began testing methods for evaluating commercial household goods carriers and directing shipments to those which provided

high-quality service at a reasonable cost. From May 1975 through April 1976, shipping data was collected and evaluated on domestic household goods shipments moving from three selected test installations: Fort Hood, Fort Sill, and Redstone Arsenal. Similar data collection was started in May 1976 for all installations in the United States, and the system holds great promise for improved carrier service.

Shipment of personal vehicles also became a subject for special attention with the start in February 1976 of a Defense import control program. This program, a result of Federal and State environmental requirements, calls for removing catalytic converters from cars before overseas shipment and reinstalling them upon return. The work is performed at personal expenses in service exchange facilities near ocean terminals.

The constant and heavy flow of American military personnel returning to the United States from overseas destinations has created a major inspection requirement which the Department of Defense shares with the U.S. Customs Service (USCS). To meet the requirement, the Customs Service trained military customs advisers during the year, maintained customs advisers in overseas military areas, granted accreditation to military commands, and refined inspection criteria. The Customs Service and the Department of Defense cooperated to keep the military transportation system free of contraband and in compliance with customs regulations. The Department of Agriculture also participated by supplying lists of prohibited food items for meals served on Military Airlift Command and contract flights.

Considerations of size, distance, and geographical distribution in the Army's overseas deployment suggest the magnitude of the logistic support task and the transportation management problems of movement and terminal operations. Both of these elements are brought together and automated under the Terminal Operations and Movements Management System. Improvements in the Standard Port System—the terminal operations portions of the overall system—were completed, and development was begun on the intransit cargo segment of the Movements Management System. The purpose of the combined program is to keep close track of theater cargo and relieve traffic congestion within theaters. Related to this system in the management field is the Defense Intransit Item Visibility System, which calls for a joint service central data bank. In July 1976 a joint working group began to prepare requirements and specifications for the central data bank.

There was operational as well as management evolution in transportation affairs during the period. In the Atlantic region the Military Traffic Management Command assumed responsibility for water terminals in northern Europe on 1 July 1976 and for the Leghorn, Italy,

terminal on 30 September 1976. Planning continued for an extension of this responsibility to the Pacific region and for a redistribution of watercraft in that area to correspond with organizational changes. Two DeLong pier barges were transferred from Thailand to Korea, and a transfer of two more from the United States to Europe was scheduled for the spring of 1977.

The Army continued to refine containerization procedures, giving special attention to container availability, port capacity, and containerized movements of ammunition by ship and rail and attendant safety problems. Safety was also a central consideration in Operation Rocking Force, a project using CH–47 and C–141 aircraft to move Sprint and Spartan missile warheads from remote launch sites to storage.

Automobile procurement came in for its share of attention when the Army and the Air Force conducted a cost analysis to see whether certain administrative vehicles might be profitably purchased from European manufacturers. Because of the long-range aspects of such an arrangement, the Army had certain reservations about the proposal and recommended that the Department of Defense study it to see if the benefits justified the purchase. Meanwhile, the Army was authorized to buy 315 intermediate (Type II) and nineteen regular (Type III) sedans for use by military police and to support the United Nations Military Armistice Commission and the Neutral Nations Supervisory Commission in Korea and certain essential commanders.

In addition to dealing with the operating aspects of logistic transportation, the Army conducted a number of strategic mobility studies to refine requirements, develop alternatives, and identify elements to be incorporated in strategic mobility program objectives. The House Appropriations Committee surveyed Defense strategic lift requirements, reviewing Army programs bearing on the subject. The Army prepared a strategic capability assessment for the Secretary of Defense to use in discussions on U.S. strategic lift and unit closure times with the defense ministers of the North Atlantic Treaty Organization. Movement control requirements and capabilities in U.S. Army, Europe, were also reviewed, and the findings will be used in transportation planning for wartime.

Facilities and Construction

For fiscal year 1976 and the transition quarter the President's budget included $999 million for military construction, and the Congress appropriated $827 million. The request emphasized facilities that would benefit the soldier and take account of the pressing need for energy conservation, pollution abatement, and nuclear weapons safety. Consideration also had to be given to the continuing requirement for a sixteen-division force.

All of these concerns were carried forward in the preparation of the budget for the coming fiscal year.

Two projects were approved for reprogramming: a $1.385 million project, later increased by $0.139 million, for a TRI–TAC Joint Test Facility at Fort Huachuca, Arizona, and a $7.363 million project for armament development facilities at Picatinny Arsenal, New Jersey. Contingency funds for schools in Germany and a laser test facility in New Mexico were also approved.

The following chart portrays the Army's military construction projections in the five-year Defense program for the 1978–82 period. Dollars are expressed in millions, represent total obligational authority (TOA), and are related to a fiscal year 1977 base:

	Fiscal Years					
	1977	1978	1979	1980	1981	1982
Major construction	$467	$755	$877	$953	$1,008	$1,082
General authorization	66	79	68	64	93	93
Nato infrastructure	80	90	90	90	90	90
Total	613[a]	924	1,035	1,107	1,196	1,265

[a] New TOA approved by Congress.

During the period of this report no changes were announced concerning the status of installations. Several that had been previously scheduled were completed: Fort Hamilton, New York, became a subinstallation of Fort Dix, New Jersey, and Pueblo Army Depot in Colorado and Savanna Army Depot in Illinois were reduced to depot activities. In the National Capital Region the Army announced on 1 April 1976 that it would study the possible closure of Vint Hill Farms Station in Virginia and the relocation of communications and security activities from Arlington Hall Station on the outskirts of Washington, D.C. Also to be studied was the possible relocation of the headquarters of the U.S. Army Medical Research and Development Command from the Washington area. In this connection, the Army was directed to reduce its population in the National Capital Region by 500 military and 500 civilians by 30 September 1977.

As noted earlier the Secretary of Defense in July 1976 directed that a long-range base structure plan be developed to identify essential major installations in the United States twenty years from now and beyond and that a base structure model be prepared to facilitate planning for the development and retention of these bases. Data was collected and force projections developed for the twenty-year period, and evaluations were in progress as the year closed.

To assist in planning, the Army developed a new concept for computerizing mobilization requirements and identifying the cost of expanding installations to capacity to accommodate additional troops. An installation expansion capability guide was drawn up using standard lay-

outs to help match an installation's facilities and expansion capacity with the actual assignment of troops. The layout areas are designed so that tents or wood or prefabricated housing can be quickly fitted into the existing facilities pattern.

In 1973 a design guide series was established to replace previously issued design standards. Criteria were developed for planning and designing community-type facilities to meet the changing needs of Army recreation and welfare programs. Eight architectural design contracts were awarded, and by the end of 1976 design guides for Army service schools, arts and crafts centers, auto crafts centers, and criminal investigation facilities had been completed. Others for officer and noncommissioned officer clubs, recreation centers, administrative office space, chapels and religious education buildings, and military police facilities were being prepared.

In another design activity, the Army participated in the Federal Design Improvement Program by sending representatives from the twenty-one engineer field offices to the Engineer Design Improvement Conference held in September 1976 to discuss military construction problems.

The Army's attention to design considerations was matched by its concern for the nation's cultural environment and commitment to historic preservation. A manual was distributed outlining administrative procedures for a comprehensive preservation program to insure that Army properties possessing historical, architectural, archaeological, and cultural significance are protected. Seven sites were nominated for inclusion in the National Register of Historic Places, and five were accepted.

For the first time the Corps of Engineers in fiscal year 1976 provided funds directly to District Engineers to be used to assist installations in master planning. The amount of $6.6 million was allocated for this purpose in the report period. The Corps also developed automated data processing objectives, priorities, and milestones to be used at the headquarters and field operating agency levels in common management and reporting systems related to the military construction program.

Modernization is a companion activity to new construction in the Army's construction program, and important strides were made in 1976 in medical and dental facilities as a result of a modernization drive begun by the Secretary of Defense in 1972. The 760-bed Eisenhower Army Medical Center at Fort Gordon, Georgia, was completed and occupied in April 1976, at a cost of $35.69 million. It is the latest regional medical center and will be used for training as well as specialized medical care. At Fort Eustis, Virginia, additions and alterations to McDonald Army Hospital were completed in January 1976 at a cost of $4.8 million. The new forty-bed Redstone Army Hospital in Alabama,

contracted at $9 million, was about 60 percent complete as the year ended, and a $7.83 million contract to renovate the Noble Army Hospital at Fort McClellan in the same state was awarded in June. A sophisticated and innovative 241-bed medical care facility for Fort Campbell, Kentucky, was in the design stage, and at Nuremburg, Germany, an addition and alteration project for the U.S. Army hospital was under design. Twenty-two Army dental clinics were also being designed or constructed using a modular layout developed at Fort Lewis, Washington, in 1974.

Public Law 90–480 requires that most Federally funded buildings be accessible to the handicapped, and the Army in 1976 published a manual establishing policy, responsibility, and criteria in this regard. Procedures have been established to assure that most new Army facilities that are open to the public and employ the handicapped are designed to comply with the criteria.

The Army is the construction agent for all kinds of specialized facilities used by the military services. One example is a building program to supply simualtor facilities for use in place of costly aircraft for flight training. More than forty of these facilities have been programmed for construction through fiscal year 1983.

Construction support is provided not only for the military services but also for other U.S. agencies and foreign governments. During the report period, the Army handled construction projects for the Air Force, the Navy, the Coast Guard, the National Aeronautics and Space Administration, the U.S. Postal Service, the Energy Research and Development Agency, national cemeteries and foreign governments. Contracts totaled $2.1 billion in the fiscal year, $1.7 of the total devoted to projects for foreign governments. For the U.S. Air Force alone, the Army, through the Corps of Engineers, acquired land and made improvements at eighteen Air Force bases for expanded clear zones. One hundred and thirteen tracts with 1,700 acres of land and improvements were acquired at a cost of about $4.3 million.

Working with the Environmental Protection Agency, the Army also developed and administered a community noise survey. Noise annoyance contours are being developed for Army installations, where blasting, helicopters, industrial plants, weapons firing, and vehicle operations contribute to noise pollution.

As with construction, the Army is heavily involved in real property matters. It controls approximately 12,687,386 acres of military land which, with improvements, have an acquisition value of over $13.2 billion. From July 1975 through September 1976, the General Services Administration disposed of 15,165 acres of Army land and improvements in the United States with an acquisition cost of over $74.4 million. An-

other 63,088 acres with an acquisition cost, including improvements, of over $90 million were reported to General Services Administration as excess. At the close of the report period there were 35,367 land use arrangements in force covering 5,988,513 acres for which the Government was receiving annual rent of $11.2 million.

On behalf of the Army, the Corps of Engineers acquired 172,771 acres of land in 5,114 separate tracts at a cost of $94.3 million, primarily for civil works projects. About 11,891 acres of this land were acquired for other agencies at a cost of $13.5 million, notably for the National Park Service for recreation areas. In August 1976 the Army, through the Corps of Engineers, executed an interagency agreement with the Federal Energy Administration to provide real estate services in connection with the strategic petroleum reserve program; to minimize the nation's vulnerability to interruptions of oil imports, petroleum products will be stored at underground sites. The Corps also continued to provide relocation assistance to citizens displaced by civil works projects.

About $948 million of operation and maintenance funds were used for real property during the year, far exceeding previous levels. Operation of utilities systems was a major factor in the cost because of increasing prices of fuels and energy. The Army's utilities bill in fiscal year 1976 was close to $300 million and is expected to reach $350 million in 1977. While sufficient funds were available to pay for fixed requirements in 1976—utility bills, salaries, fire prevention, custodial service, refuse collection, pest control—resources for maintenance and repair were extremely limited. The Army maintained a worldwide inventory of real property having a replacement value of over $79 billion, and the major portion of the investment is maintained with operation and maintenance funds, of which $400 million was required in fiscal year 1976. The sum was not adequate to maintain all facilities within established Army standards. As a result, the backlog of maintenance and repair continued to grow, reaching an estimated level of $1.2 billion.

The sheer size of the Army's real property dominion and the huge cost of operating and maintaining it on behalf of the nation suggests the importance of comprehensive management and central control. One of the primary management tools is the Integrated Facilities System, an automated information and evaluation system that encompasses the life-cycle management of real property resources from conception through design, construction, operation, maintenance, and disposal. By January 1976 the prototype test of the installation management portion of the system had been completed; by the close of the report period this element was in operation at thirteen installations highlighting work management deficiencies. The facility planning and new construction elements will be brought in as system development continues.

Army property management is often complicated by jurisdictional considerations. One problem has been that of Army installations located within a coastal zone. The Coastal Zone Management Act provides for Federal funding for coastal states to develop management and utilization plans for their coastal lands. The act is administered by the National Oceanic and Atmospheric Administration of the Department of Commerce. Under its provisions, Federal agencies, including the Army, are required to cooperate with the coastal states in the administration of the law. Yet several of its provisions proved to be contradictory: on the one hand, there is an "exclusion clause" which Federal agencies have interpreted as relieving them of mandatory compliance; on the other hand, there is a "consistency clause" which requires them to adhere to approved coastal zone management plans as fully as possible. On 10 August 1976 the Attorney General issued a clarifying decision, and the Army now proceeds on the understanding that it has full power to control lands on Army installations located within a coastal zone irrespective of state jurisdictions.

The Corps of Engineers continued to serve as the executive agent for construction of recruiting facilities, exercising its own authority and working through the General Services Administration. The program embraces new construction, relocations, and improvements to existing facilities. As of the close of the report period, there were 5,757 recruiting offices in operations.

One of the difficult problems that face facilities engineers is that of detecting entrapped moisture in roofing and underlying insulation. If this moisture can be detected in time, serious damage can be avoided and repairs made. As wet areas in roofs conduct heat more readily than dry areas, heat transmission can be detected by infrared techniques. Roofs at Army installations are now being surveyed by hand-held infrared cameras and aerial infrared detection methods. Infrared photography is also being used to locate heat loss through building walls and to detect overheating in electrical equipment such as transformers.

Security of Facilities, Equipment, and Munitions

Although security of military installations and materiel has been necessary from time immemorial, the problem has acquired new dimensions in today's activist society. Demonstrations, hijackings, bombings, arms traffic, and other kinds of terrorist activity have raised the level of the threat to military facilities and required tighter security measures.

Late in calendar year 1976 the Army began to install interior intrusion detection systems in Army storage facilities. Upwards of 2,700 such systems will be operational by the end of fiscal year 1977, and additional systems will be installed in other areas as equipment becomes available.

Tests have confirmed that this equipment is suitable for protection of post exchanges, commissaries, service clubs, and many other facilities.

Arms, ammunition, and explosives, which are very vulnerable, were the object of improved protection. Measures taken were upgrading structural standards for new and existing storage facilities, controlling access to such facilities, tightening inventory and accountability controls, installing security equipment, and investigating losses.

On 22 January 1976 the Vice Chief of Staff approved the report of the Physical Security Review Board on Chemical Agents and Munitions Security. The report called for raising chemical security to nuclear security standards by increasing guards, training inventory personnel, and rewarehousing to meet more secure storage requirements. At the same time, Patrol and Explosives Detector Dog Teams were authorized for the Military Police Working Dog Program, and these teams will be assigned to protect Army facilities. New regulations were also issued covering intransit security of arms, ammunition, and explosives on all modes of transportation, and a regulation on physical security of reactor facilities was drafted and distributed for review and comment.

Security of Army aircraft, vehicles, and associated components continued to receive priority during the year. Ignition and door locking devices were installed on Army aircraft, and locking and other security requirements for vehicles were disseminated along with summaries of specific instances of security breaches and recommendations for improving vehicular security. The Army also contracted with a research firm for a study on how to counter terrorism on military installations.

International Logistics

Two elements make up the Army's security assistance logistical support: the grant aid Military Assistance Program (MAP) and the purchase-oriented Foreign Military Sales Program (FMSP). They complement each other and have foreign policy as well as Army logistical significance.

During the report period, Army security assistance under these programs reached eighty foreign countries and four international organizations. New orders amounting to $3 billion covered materiel ranging from uniforms to missiles and included technical services, training, and foreign military construction projects. The combined undelivered balance under both programs at the end of the period was $13.5 billion.

A steadily increasing demand over the past several years for American technology, materiel, and services offered under the Army's Foreign Military Sales Program has benefited national security. In addition to enhancing U.S. rapport with foreign governments, the program has fortified the willingness of friendly nations to support U.S. base and

overflight arrangements, furthered standardization of military equipment among them, and stimulated cooperative logistical agreements between the Army and various foreign governments and international organizations. Foreign sales have also helped to maintain an active production base, and the larger runs made possible by combining American and foreign orders are more economical. The training provided to foreign military personnel also encourages individuals, armies, and governments to support U.S. interests.

At congressional direction the grant aid provided under the Military Assistance Program was gradually reduced during the past year. Between June and September 1976 the number of military assistance advisory groups was cut from forty-four to thirty-four. Legislation restricted new MAP grants to twenty countries in fiscal year 1976 and twelve in 1977; in addition, ceilings were placed on aid to eight nations in both years. Except for congressional authorization for specific countries for specific amounts, the Military Assistance Program is scheduled to be terminated by 30 September 1977, with prior commitments completed by 1980.

Grant material and logistical services provided by the Army were materially reduced from the $800 million level of 1975 to $60 million during the fifteen-month fiscal year. The reduction resulted not only from legislative decisions, but also from the increasing capacity of foreign nations to support themselves. Based upon current commitments, grant aid material and logistical support for the report period went to thirty-one countries. Grant aid was suspended for Turkey in February 1975 and Lebanon in April 1976; aid terminated for Greece at its request in January 1973 was renewed in June 1976. Total grant aid for all countries since the beginning of the program in 1950 and through the end of fiscal year 1976 was about $19 billion in material and services.

In contrast to the relatively small grant aid program, various countries and international organizations placed about $2.9 billion in new orders during the year. The dollar value of new orders for materiel and the logistic services declined from $3.9 billion in 1975. The grand total of the program since its start in 1950 is $21.2 billion. Highlights of the program (new orders) in the current period appear in the following table:

FOREIGN MILITARY SALES
1 July 1975–30 September 1976
(In millions of dollars)

Israel	$143.2	Japan	$14.0
Saudi Arabia	1,398.0	Korea	81.0
Iran	768.8	Philippines	25.8
Greece	90.0	Thailand	7.6
Turkey	21.1	Latin American	33.2
Republic of China	126.0		

In addition to the grant aid and sales of major end items and services, the Army provided repair parts for major end items and weapons systems of U.S. origin through supply support arrangements. Under these

arrangements the foreign country buys into the Army's supply system using its supply procedures, systems, and facilities on the basis of prefunded contracts. These supply support arrangements are renegotiated annually and were in force with twenty-one countries for over 1,500 separate items at a cost of $336 million.

Nineteen coproduction programs were in force during the period with Japan, Korea, and Taiwan, amounting to about $2.1 billion, of which about $1.2 billion would be returned to the U.S. economy. Included were rifles, tactical radios, trucks and general purpose vehicles, mortars, and missile system items. Among the major programs were Japan's manufacture of over $8 million of missile system parts and components; the Republic of China's $50 million worth of ammunition, helicopters, and trucks; and Korea's $81 million worth of ammunition, missiles, launchers, and repair parts.

Effective with the billing quarter beginning 1 January 1977, the U.S. Air Force, as Department of Defense executive agent, will assume the billing function, cash collection, trust fund accounting, and administrative fee management of the Foreign Military Sales Program. The Army transferred the trust fund cash and program files for Saudi Arabia, Iran, and Israel on 20 November 1976. The balance of the trust fund cash will be transferred on 31 December 1976 and the balance of the audited files by 20 June 1977.

As a result of statutory changes and revised Defense directives, new pricing guidelines were established this year. Rather than basing pricing essentially on procurement costs at the time of manufacture, the services will use replacement value at the time of sale to replace exhausted stocks. Billings will include add-on charges to insure full recoupment for the use of Defense materiel, facilities, and services. In appropriate cases, reductions are granted when warranted by product demand, useful life, and condition.

Based upon congressional intent and General Accounting Office guidelines, course tuition costs for foreign student training were switched from an incremental method, under which fixed or constant costs were not included, to a pro rata basis which considers all costs, indirect and fixed, and distributes them over specific elements of operation such as population, hours, or course length. This method insures that foreign governments pay a fair share of course costs for their students.

There were a number of reciprocal visits connected with international logistics during the year. Army representatives participated in negotiations in various countries, especially where large purchases of U.S. equipment were involved, and representatives from Ethiopia, Jordan, Kenya, the Netherlands, Peru, and Saudi Arabia visited the United States to discuss their needs and make purchase arrangements.

IX. Support Services

This section on support services brings together a number of topics dealing with the needs and welfare of the men and women who serve in the U.S. Army. These include such activities and services as housing, food service, recreation, education, and medical affairs. The activities themselves reflect the increased emphasis placed on improving the quality of Army life, both to attract young Americans into the ranks and to retain competent and experienced soldiers.

Religion

In common with other members of the Army community, chaplains move regularly from one assignment to another. The typical chaplain is reassigned every three years, and each time he may encounter difficulties in organizing his new pastorate. To help combat this problem the U.S. Army Chaplain Board joined with the Alban Institute, Washington, D.C., in the spring of 1976 to sponsor research projects at two Army posts. The results of these studies will presumably disclose the best methods for beginning a new ministry in a new parish assignment.

During the past year the Chaplain Parish Organization Development Network continued to expand. Begun in 1971 as a means of organizing chapel programs responsive to community needs, the network relies on a group of chaplains who have been trained in consulting skills. In addition to performing their normal pastoral duties, these members of the clergy respond to requests for assistance from installation and post chaplains. Presently there are fourteen trained and experienced chaplain consultants. Seven others are currently training as interns and will be available for consultation within a year.

During the past fiscal year the Army chaplaincy studied the processes used for its chaplains' professional development. This study resulted in planned changes to the education and training program that will reduce the time spent in residence at the U.S. Army Chaplain School and transfer significant portions of training to the field. The Army will introduce these changes during fiscal year 1977.

Housing and Homeowners Assistance

The approved fiscal year 1976 Army Military Construction Program provided $219.2 million for construction of 17,455 new troop housing

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spaces and $48.7 million to modernize 9,062 existing spaces. Except for 2,544 spaces in Korea, all new construction will take place within the United States. The Army Military Construction Program for the upcoming fiscal year, by contrast, includes $123.7 million for a total of 9,317 spaces. This funding will permit construction of 5,208 new spaces and modernization of 1,492 billets in the United States; troops in Korea will get 2,559 spaces, of which all but 192 will be new, and 58 new billets will also be built in Germany.

With the exception of the fifty-eight spaces scheduled for Germany, construction costs for troop housing in that country are covered by offset agreements. At the end of the 1976 fiscal year, 6 barracks and housing at 11 remote sites were completed under the fiscal year 1974–75 agreement, and work was under way at 19 barracks and 3 remote sites. Work at fifty-three barracks and all remote sites undertaken pursuant to the fiscal year 1972 offset agreement was approximately 99 percent complete at the end of the report year.

One of the Army's goals continues to be to program enough troop spaces to properly house all bachelor soldiers by 1980. In 1976, as a result of programmed construction and a Defense decision to stop programming bachelor housing in the United States for "geographic bachelors"—married persons temporarily separated from their families—the Army moved substantially closer to that goal. Present trends indicate that the target will be reached in all areas except Korea, where an additional two years may be required.

Housing built in recent years on major installations throughout the continental United States has followed two standard architectural designs. In May 1976 a team reprsenting the Corps of Engineers, the Office of the Deputy Chief of Staff for Personnel, the U.S. Army Training and Doctrine Command, and the U.S. Army Forces Command visited a number of bases where housing built according to the standard designs had been in use for more than a year. The team used questionnaires to interview occupants, commanders, and facilities engineers and concluded that the designs were both suitable to Army needs and well received by soldiers who lived in the buildings.

Based on long-range strength and deployment estimates, the Army has requirements for 342,000 family housing units. Military-controlled housing and suitable off-post housing total 310,000 units, and a deficit of 32,000 units remains. During fiscal year 1976 the Army gained 5,497 family housing units, including 2,546 by construction, 2,559 by lease, and 392 by conversion or transfer. Deducting losses by disposal, conversion, transfer, and lease termination, there was a net gain of 3,778 units.

The Army awarded contracts for construction of 2,457 family housing units during the past year, while contracts for construction of

3,600 units authorized in fiscal year 1976 and prior years remained to be awarded. The fiscal year 1977 budget request submitted to Congress included $25.5 million for construction of new units, $17.8 million for improvements, and $2.2 million for minor construction and planning. The financial program for fiscal year 1977 through fiscal year 1982 includes $201 million for construction of 3,450 new units, $84 million for improvements, and $17 million for minor construction and planning. Operation and maintenance support was provided for an average of 141.184 family dwelling units and supporting facilities. During the year the deferred maintenance backlog was reduced from $162 million to $153 million; present plans are to reduce the backlog to $110 million by the end of fiscal year 1982.

The fiscal year 1977 budget request submitted to Congress includes $61.5 million for leasing 13,096 family housing units, of which 9,078 would be located in Germany. During the last year the number of leased family quarters in Germany rose from 2,819 to 3,811 units, but continuing shortages called for further expansion of the number of units leased. The budget request also includes $21 million for furniture and equipment, $377.4 million for operation and maintenance, and $25 million to reduce deferred maintenance. The financial program for fiscal year 1977 through fiscal year 1982 includes $323 million for support of the 13,096 leased units, $126 million for furniture and equipment, $2,679 million for operation and maintenance, and $62 million for reduction of the backlog of deferred maintenance.

During the last year the policy for assigning family housing was changed to permit dependents to retain government quarters when the sponsor is assigned to an unaccompanied tour of from twelve to thirteen months overseas, provided the sponsor has advanced assignment instructions directing his return to his old duty station or to another location in the continental United States or Hawaii. The best present estimate is that this new policy alleviates some of the individual hardship in changes of station without significantly affecting the overall housing situation.

During fiscal year 1976, Housing and Referral offices at 151 Army installations obtained private housing for 125,645 persons in the military. These offices also handled 116 complaints of discrimination and 25,503 disputes between tenants and landlords. Over 100,000 facilities with approximately 1,000,000 housing units were listed with these offices.

The Army, as executive agent for all military services, paid $1.8 million under the Homeowners Assistance Program to 495 applicants during the past year. In addition, mortgage assumptions on 126 properties acquired under the program totaled $2.4 million for the year.

Congress last year approved the troop housing section of the Army Military Construction Program for both fiscal year 1976 and 1977. The

new barracks will support the sixteen-division Army as well as the One-Station Training Program. Approved funding is as follows.

(a) Three new division stations for the sixteen-division Army:

	Fiscal Year 1976		Fiscal Year 1977	
	Spaces	Cost	Spaces	Cost
Fort Ord	3,197	$22.8 million	—	—
Fort Polk	2,251	38.1 million	1,650	$33.8 million
Fort Stewart	1,880	33.3 million	1,609	32.9 million

Except at Fort Ord, where existing barracks will be modernized, all expenditures are for new construction. These expenditures will complete programmed requirements for barracks at the three installations.

(b) Trainee barracks for one-station training:

	Fiscal Year 1976	
	Spaces	Cost
Fort Benning	2,340	$28.4 million
Fort McClellan	1,996	21.6 million
Fort Sill	1,170	15.8 million

No funds are programmed for trainee barracks at these installations during the upcoming fiscal year.

The troops of Brigade 76 have been permanently housed in the Wiesbaden area in former Air Force barracks at no major cost. Brigade 75 is using temporary barracks and other facilities. The Federal Republic of Germany is financing and building new barracks for the unit in the Garlstedt-Bremerhaven area.

In response to a Senate Appropriations Committee and a House Appropriations Committee Joint Conference Report, the Army is conducting a review of its plans for stationing divisions and brigades. The objective is to determine the most efficient way to station the units. A report of findings is to be submitted to both committees before February 1977. The study will concentrate on (1) stationing of major combat units, training centers, schools, and logistic activities; (2) recommending home stations for forward deployed brigades and divisions; (3) determining the types of forces that individual installations are best suited to house; and (4) determining the cost of construction necessary for initial occupancy and for permanent facilities for specific types of forces. The study will also include recommendations on the most cost-efficient plans for stationing major combat units.

Food Services

In May 1976 the Senate Subcommittee on Federal Spending Practices, Efficiency, and Open Government conducted hearings on Department of Defense meat procurement practices. The subcommittee uncovered evidence of improprieties in that activity, and the Secretary of the Army responded by establishing an ad hoc committee of general

officers to investigate the causes of the problem and to recommend remedial action. As a result of the ad hoc committee's review, completed in August 1976, the Army has taken a number of actions to improve procurement and quality control of military food supplies and has moved to enhance the morale and welfare of Veterinary Service personnel by establishing minimum grade requirements and authorizing government-leased housing for married and bachelor enlisted people. Housing is considered especially important because most of the food vendors who supply Department of Defense requirements are located in metropolitan areas where the cost of housing is particularly high. Additionally, the Army's Academy of Health Sciences has sought to meet the need for more specific training in the inspection of fabricated beef by operating a series of two-week courses on the subject. Finally, supervision of inspectors will now receive close attention at all levels.

The number and type of food service facilities supporting the Army Food Service Program, as of 30 September 1976, were as follows:

	CONUS	Overseas	Total
Dining facilities	724	448	1,172
Garrison bread bakeries	0	3	3
Central pastry kitchens	3	0	3

Army dining facilities served 310,713,083 meals valued at $292,000,672 during fiscal year 1976; garrison bread bakeries produced 1,245,000 pounds of bread; and central pastry kitchens made 5,142,900 pastry servings.

Research and development for food services is primarily directed at improving the delivery of food in the field while reducing the number of personnel required to provide it. One such effort, under the direction of the Natick Research and Development Command, involves the organization of a food service company, operating battalion messes, that will use new equipment and disposable supplies to provide food service support on an area basis. The first test of the unit was conducted in August 1975 at Camp Edwards, Massachusetts, using National Guard units. The outcome demonstrated that this consolidated feeding system requires only about half the cooks and kitchen police now employed in company field kitchens. A second test, using Marine units at Camp Pendleton, California, concentrated on the new equipment the food service company would use. This exercise showed that two new systems, the multiple mobile field kitchen trailers (XM76) and a new tent system (XM75) were both superior to items presently in military inventories. The Natick Research and Development Command believes the tent system is the better of the two. The U.S. Army Training and Doctrine Command has been at work on the same question, but its studies have concentrated on reducing the number of personnel needed for food service without acquiring new equipment or making more than minimal changes in cur-

rent operations. The field test of this concept was conducted at Fort Hood, Texas, during April 1976, and results of the study will be available next year.

Major commands are responsible for developing food service management plans, which must be submitted to the U.S. Army Troop Support Agency. The agency uses the plans to help determine which dining facilities should be retained or converted to other uses, to identify places where new dining facilities should be built, and to project the resources needed for modernization and new construction. As of September 1976, permanent dining facilities to be modernized had been identified at eighty-two Army installations in the continental United States and the Panama Canal Zone. Installation food service management plans for Korea, Japan, Okinawa, and Europe are in varying stages of completion.

The purpose of the Dining Facility Modernization Program, begun in July 1974, is to renovate those existing dining facilities that are worth retaining. Projects are funded through the Military Construction, Army (MCA), appropriation. Complete modernization includes providing an attractive dining area decor, a well-designed self-service area, separate short order and regular meal serving lines, modern equipment, and adequate restroom and locker facilities. A total of 441 dining facilities have been selected for modernization. Of these, 75 were scheduled for renovation during fiscal year 1976, at an estimated cost of $25.5 million, and contracts for 71 of the facilities were actually awarded; 239 are to be modernized through fiscal year 1978, with the remainder scheduled for fiscal year 1979 and beyond.

The MCA appropriation for last year also included money for the construction of fifteen new dining facilities at nine installations at an estimated cost of $21 million. As of 30 September 1976, contracts had been awarded for the construction of all fifteen of the facilities.

As noted in the fiscal year 1975 report, work on the central kitchen of the interim central food preparation facility at Fort Lee, Virginia, was halted because unexpected problems pushed the cost of the kitchen beyond the limit authorized by law for urgent minor construction projects. Last year, however, the Army received approval for spending additional money on the project, and construction of the central kitchen got under way in June 1976.

During the last year the U.S. Army Troop Support Agency maintained four Food Management Assistance teams, whose purpose is to offer dining facility management and technical assistance to Army food service people. The teams visited fifty-nine installations and 1,460 dining facilities, offering help to 7,761 Army food service personnel. The Troop Support Agency teams also visited 450 dining facilities under the control

of the Army Reserve and National Guard, where 2,440 persons working in the food service field received the benefit of professional advice.

The annual Philip A. Connelly Award Program for Excellence in Army Food Service recognizes unit eminence in the preparation and serving of food in Army troop dining facilities and provides additional incentive to the food service competition program of the major field commands of the Army. The eighth winner in this program in the Small Dining Facility category was the 2d Battalion, 503d Infantry, 101st Airborne Division, Fort Campbell, Kentucky. The winning unit in the Large Dining Facility category was the Special Troops Consolidated Dining Facility Number 3, Redstone Arsenal, Alabama.

Commissaries and Subsistence Supplies

The Army commissary system currently includes 109 main stores, 34 branch stores, and 45 annexes. Annual sales for fiscal year 1976 exceeded one billion dollars ($1,028,925,076). In accordance with Defense instructions, the Army last year moved to centralize the management of this huge operation. Under the new arrangement, responsibility for command and control of commissaries has been transferred from major commands and installations to the U.S. Army Troop Support Agency, an operational element of the Office of the Deputy Chief of Staff for Logistics. Troop issue, however, has been separated from commissary operations and will remain a responsibility of major commands. The Troop Support Agency has established five field offices to manage commissaries in various regions. The offices are located at Fort Lee, Virginia; Fort Lewis, Washington; Fort Meade, Maryland; Fort Sam Houston, Texas; and Zweibruecken, Germany. At the end of the fiscal year all field offices were operational. If the new system is a success, it should produce savings of 793 personnel spaces in its first full year of operation and an additional 45 spaces by the end of fiscal year 1977. The dollar value of these spaces is about $6.5 million annually.

In February 1976 the Army put into effect its legal authority to raise the commissary surcharge rate. The increase was 1 percent in the continental United States and Hawaii and 1½ percent in Alaska and overseas areas, so that the rate everywhere is now uniform at 4 percent. The additional money the surcharge will produce, estimated at $12 million annually, is to be used for the construction and improvement of commissary facilities in the United States. During fiscal years 1977 and 1978 these funds will be used to build new stores at Fort Bliss, Texas; Fort Gordon, Georgia; Fort Lee, Virginia; Fort McClellan, Alabama; Fort Stewart, Georgia; and Redstone Arsenal, Alabama. The Army will continue to program for money (Military Construction, Army) to finance

construction of commissaries outside the United States. Excess surcharge funds will augment such appropriated funds.

The Automated System for Army Commissaries (ASAC 360E+) has been installed in the southeast region and will be extended to the northeast, midwest, and western regions early in fiscal year 1977. The automated system is essentially an inventory control program, but improvements now under development will enable it, at least temporarily, to support the new central management organization in such areas as requirements, determination, cataloging, and management information reporting.

Laundry and Dry Cleaning

The recent adoption of the polyester uniform for all military personnel and a continuing scarcity of unskilled labor have combined to create new demands for more sophisticated laundry processing equipment. Conventional machinery does not clean synthetic materials well, and manpower shortages would have been acute had Army laundry facilities not purchased new equipment that cleans better and greatly reduces labor requirements in the washroom and the garment finishing process. Almost all Army facilities now have these machines.

During the fiscal year the concept of hanger service was expanded, so that now almost all patrons receive their cleaned outer garments on hangers rather than in folded, wrapped bundles. Facilities which have converted to this system have discovered that costs are similar to those involved in folding and wrapping garments.

The Army has also improved the organization of its laundry system. The elimination of manually prepared monthly laundry rosters of unit personnel has simplified the job of sending soiled apparel to the laundry. These rosters may now be prepared by automation; each month a computer prints the roster, based on the number of participating patrons enrolled the previous month. Only new starts and quits must be added to the automatic system. The change has been especially helpful to units that have lost their supply clerks, whose job had included preparation of the roster. Additionally, all laundry facilities have been authorized to establish pickup stations located at appropriate points around the installation, generally near large troop concentrations or areas remote from the central laundry facility. The additional convenience to customers of dropping off or picking up bundles without visiting the central laundry has improved service and increased participation among eligible patrons.

Clothing and Personal Equipment

The durable press tan uniform, under development since 1967, replaced the cotton khaki uniform in the men's initial issue clothing allowance at the end of fiscal year 1976. Limited stocks of khaki uniforms

remaining in the supply system will be issued along with the durable press tan uniforms. The Army also has plans to introduce durable press fatigues and a women's summer uniform during the next two fiscal years. Because the role of women in the military is steadily expanding and encompassing many of the jobs traditionally filled by men, women will now receive more of the items of clothing long issued to their male counterparts, such as fatigues and combat boots.

During fiscal year 1975 the Army examined the possibility of transferring Army clothing sales stores to the Army–Air Force Exchange Service but concluded that no advantage would be gained. During the last fiscal year, however, the Comptroller of the Army suggested that the subject be reopened for review and study in an effort to make better use of existing personnel spaces. Responses from Department of the Army staff sections and major commands indicate that the transfer may be feasible after all.

Heraldic Activities

The work of the Institute of Heraldry during fiscal year 1976 included the design of 501 heraldic emblems, the creation of 3,315 drawings and paintings, and the completion of 316 sculptured items and displays. Additionally, 217,638 heraldic quality control actions were taken and 5,110 development, research, and engineering support actions were performed.

Employees of the Institute of Heraldry also designed or helped develop the Secretary of the Army's Award for Outstanding Achievement in Materiel Acquisition, the Department of the Army Civilian Service Commander's Award, the Defense Superior Service Medal, the Air Force Air Traffic Controller badge, the U.S. Coast Guard Command Ashore insignia, a badge for the U.S. Postal Service, the seal, wall plaque, and flag for the Supreme Court, and the flag of the Chief Justice of the Supreme Court.

Since World War II, the Army's heraldic activity has provided advice and services in heraldic matters to the president and vice president. After an executive order directed changes in the vice presidential coat of arms, seal, and flag, the Institute of Heraldry helped develop new items. The change in design also brought about a new badge for vice presidential aides, which is currently under development.

Morale, Recreation, and Welfare

Based in part on a U.S. Army Audit Agency report and a perception that distributing money from the Army Morale Support Fund on a per capita basis led to inequities, the system of allocation was changed and is now based on the financial requirements of individual commands.

Major commands now prepare their morale and recreation budgets to show what resources are available to them from appropriated and local nonappropriated funds and then state their requirements for additional money from the support fund. Disbursements may then be made on the basis of need. This procedure produced a total allocation of $21.5 million from the Army Morale Support Fund in fiscal year 1976.

During the last fifteen months the Army won ten of fourteen interservice sports competitions. By providing 50 percent of the athletes on the armed forces teams the Army was a key contributor to the success achieved in the Conseil International du Sport Militaire (CISM) competition. Participating in 12 events, the American teams won 6 CISM championships, 1 second place, and 1 third place. Soldiers also took part in thirteen national competitions either as members of armed forces teams or by entering as all-Army squads. In basketball, the armed forces team was runner-up in the AAU (Amateur Athletic Union) National Tournament, and all-Army teams took second place in women's national softball competition as well as third places in boxing and team handball.

The 14th Army Band, heretofore an all-woman organization with the parenthetical designation as the Women's Army Corps Band, was redesignated as a standard Army separate band and received its first male members. At the same time, female personnel joined the U.S. Military Academy Band for the first time in its 163-year history. The Continental Army Band at Fort Monroe, Virginia, became the first separate band authorized a captain in command as the bandmaster.

The Department of the Army, in cooperation with the National Federation of Music Clubs, has participated in the Parade of American Music for a number of years. The annual event is part of a nationwide effort to promote American music and to improve musical programming and planning. During the 1976 Parade of American Music, Army installations, activities, and individuals won 541 Awards of Excellence, the highest the Army has ever achieved. Of the total number of prizes earned by Army entries, the U.S. Army Forces Command won 163; the U.S. Army Training and Doctrine Command 138; U.S. Army, Japan, 99; Eighth Army 70; U.S. Army, Europe, 36; and U.S. Army Communications Command 35.

During the last fiscal year the Army undertook a comprehensive study of its library systems. The purpose of the study was to identify library missions, resources, service functions, fund support, and problem areas, and to recommend policies for improved management of the libraries. The final report recommended a central management office and identified areas for cooperative library activities. Fulfillment of the study recommendations is contingent upon obtaining concurrence from those

Army staff agencies and major commands that have operational control over the various libraries.

During fiscal year 1976 the Army closed all club operations in Thailand and at two installations in the United States. Normal dissolution procedures, including disposition of assets and performance of terminal audits, were conducted. The Army Club Fund, as successor-in-interest, received assets worth $770,963 from the clubs closed in Thailand, $17,098 from the inactivated Safeguard Missile Site in North Dakota, and $11,935 from the Savanna Army Depot in Illinois.

The grand opening of the Hale Koa Armed Forces Hotel at Fort DeRussey, Hawaii, took place in October 1975. The purpose of the hotel is to offer recreational facilities in a highly desirable area at prices that soldiers can afford. The complex includes quality hotel rooms as well as a number of restaurants, bars, and specialty shops. The recreational program is extensive and includes organized sports, bathing, tours, and other entertainment. Regulations are structured to give priority to enlisted personnel. Built and operated with Army nonappropriated funds, the facility may be used by active and retired service personnel. The beach area is open to the public.

As a result of a realignment within Headquarters, Department of the Army, the Retired Activities Division has been taken from the Military Personnel Center and returned to the Personnel Affairs Directorate of The Adjutant General Center. The Retired Activities Division provides a single point of contact for retired soldiers and their families and is responsible for the Retirement Services Program.

The United States Soldiers' and Airmen's Home was established in 1851 to provide comfortable living for old, invalid, and disabled enlisted and warrant officer members of the Regular Army and, since 1947, the Air Force. It has consistently accomplished its purpose without any expenditure of taxpayer funds. Instead, its income has traditionally come from monthly payroll deductions of twenty-five cents from active duty Regular soldiers and airmen, from fines and forfeitures imposed by courts-martial, and from the interest paid on a permanent trust fund maintained by the U.S. Treasury. Since 1971, however, the home has experienced the strain of rising costs and constant or decreasing revenues. To meet the problem Congress enacted legislation in September 1976 to improve the financial base of the home. In the future, all residents of the Soldiers' and Airmen's Home will be charged a user fee of at least 12.5 percent of their federal-source annuity or retirement income, and the services now have the authority to double the monthly payroll deduction to fifty cents. The Comptroller General of the United States will review the immediate and long-range financial requirements of the home and will report its findings to Congress in the upcoming fiscal year.

Education

The value of the Army's long-standing commitment to educational programs is demonstrated by a series of surveys showing that the opportunity to acquire skills useful in the civilian community, to continue formal education while in service, and to earn the GI Bill educational benefits are attractive enlistment incentives. In fact, a survey recently prepared for the Department of Defense concluded that the Army is the service that does the most to help young Americans get college educations. In recognition of this interest, the Army expanded and refined the services offered through its network of 331 education centers. As a result, participation and accomplishments in voluntary educational programs continued to increase in fiscal year 1976.

Course Completions	Fiscal Years 1974	1975	1976
High school level	124,002	115,789	157,982
College (undergraduate)	134,234	134,462	158,751
College (graduate)	24,603	20,605	22,908
Vocational/technical	12,008	27,671	40,339
Foreign language	61,011	76,833	97,547
Tests administered	913,409	288,695[a]	487,822[b]

[a] Drop in activity caused by closing the United States Armed Forces Institute, 31 May 1974.

[b] Overseas high school general education development and college-level examination program testing reinstituted through the Defense Activity for Non-Traditional Support.

During the past year Congress made several efforts to alter existing educational benefits under the GI Bill, and ultimately an amendment to the Post-Vietnam Era Veterans Readjustment Assistance Act accomplished that end. The amendment provides for a voluntary program, wherein the service member contributes between $50 and $75 per month to an educational fund maintained by the Veterans Administration, and that agency matches each dollar of the individual's contribution with two dollars of federal money. The Secretary of Defense is authorized to augment this amount to encourage persons to enter the armed forces. The maximum amount that can accumulate from individual and Veterans Administration contributions is $8,100. Once a soldier has completed his first obligated enlistment, he may draw on these funds to further his education.

Project AHEAD (Army Help for Education and Development), whose purpose is to help young men and women enlist in the Army and pursue an education at the same time, grew substantially in the last year. Presently more than 1,400 colleges and educational institutions support this educational concept, and Army participation is approximately 6 percent of all Army enlistees with no former service. Comparable figures for fiscal year 1975 were 1,200 educational institutions and a participation rate of 5 percent. As a means of encouraging greater use of Project AHEAD the U.S. Army Recruiting Command has prepared brochures and flyers describing the program. In conjunction with The

Adjutant General Center, the command has also published a *Catalog of Army Education Centers* and a *Catalog of Project AHEAD Participating Schools*. All Army education centers, as well as high school and college counselors, received copies of these catalogs.

As a means of easing the transition into a different society, the Commander in Chief, U.S. Army, Europe, asked that soldiers and spouses assigned to Germany acquire some familiarity with the host country's language and culture before their arrival in Europe. The Department of the Army responded by developing a program calling for the mandatory enrollment of battalion and brigade commanders in a six-week German course at the Defense Language Institute in Monterey, California. Other soldiers and dependents are encouraged to participate in a forty-hour Headstart program, using course materials available at fifty-six installation Army education centers throughout the United States.

In April 1975 The Adjutant General undertook a study of the feasibility of extending tuition assistance and other educational services to the National Guard and the Army Reserve. The purpose of the study was to learn what the attitudes of guardsmen and reservists were toward reserve service, to determine the effects education benefits would have upon retention of personnel without previous service, and to compile other information upon which recommendations about educational programs could be made. The results of the study were published in April 1976. The Adjutant General concluded that a program of tuition assistance would have a positive effect on National Guard and Army Reserve recruiting and retention. The study also included cost estimates. Subsequently, this cost data was incorporated in a proposed Air Force report to Congress on legislation dealing with a tuition assistance program for the reserve components.

In fiscal year 1976 the Army and the Department of Labor took the first formal steps to establish an Army job recognition program (JOBREC) that would officially acknowledge the skills soldiers acquire in the course of performing their military duty. Such recognition will presumably help soldiers returning to civilian society to find jobs commensurate with the talents they developed in the Army. The first program to be registered with the Bureau of Appenticeship and Training in the Department of Labor was the Engineer School's course of instruction for military equipment operators and mechanics. Thereafter, the Chief of Staff ordered The Adjutant General to expedite development of JOBREC programs and expand consideration to all Army personnel. The Adjutant General, in turn, formed a study group charged with proposing procedures and priorities for development of JOBREC programs for officers and enlisted personnel in all specialties. As a result of

this increased interest, a variety of programs were registered with the Department of Labor from July to September 1976. These included programs for cooks and bakers, aircraft electricians, airframe repairmen, marine engineers, marine hull repairmen, motor transport and marine craft operators, terminal operations personnel, central office telephone installers, and radio communications technicians.

Health and Medical Affairs

Total Army expenditures for medical services for all appropriations amounted to $1,243 million in fiscal year 1976, an increase of $98 million from the previous year. The additional disbursements were primarily the product of salary increases and the continued rise in the cost of providing health services in both Army and civilian facilities. The increased expenditure would have been greater if there had not been a reduction in research and development in the field of drug abuse.

A distribution by appropriations was as follows:

	(In millions) of dollars)
Military Personnel, Army	$530.8
Operation and Maintenance, Army	548.2
Research and Development, Army	55.7
Military Construction, Army	62.5
Other Procurement, Army	36.0
Reserve Personnel, Army	9.9
Total	1, 243.1

The trend toward more extensive use of outpatient services continued in fiscal year 1976, with a 3 percent increase in clinic visits and a 3 percent decrease in bed occupancy. The strength of the Army, by contrast, decreased 0.5 percent. The primary cause of the lower rate of bed occupancy was a reduction in the average length of stay for all patients from 7.8 days to 7.4 days. The average length of stay of active duty Army personnel decreased from 9.9 days to 9.1 days, while the total number of admissions for such patients remained virtually constant.

At the beginning of the year the actual and authorized strengths of the Army Nurse Corps were both 3,706. At year's end the actual strength was down to 3,510 nurses, and authorized strength was 3,535. To augment this professional nursing staff, the Army also employed 2,187 civilian nurses. Seventy-seven percent of Army Nurse Corps officers were in company grades and the remainder in field grades. The number of Regular Army officers decreased during the year from 989 to 973. As of the end of June 1976, 25 percent of the Nurse Corps personnel was male.

Legislation that became effective in February 1976 contains an important change in the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). As a means of reducing CHAMPUS costs and insuring better use of uniformed services medical treatment

facilities, Congress has directed tnat CHAMPUS funds may not be used to pay claims for routine inpatient hospital care if such care is available at a military hospital within forty miles of the patient's residence. If a particular form of care cannot be provided at a military facility, the hospital commander will issue a nonavailability statement that will allow the patient to seek authorized care in a civilian hospital.

Within the limits of its resources, the Army has sought to extend the benefits of dental care to the maximum number of eligible personnel. A system of professional review and accountability has been adopted, wherein each installation in the United States will have a director of dental services accountable to the installation commander. The director will also have an officer of the Dental Corps in his chain of command at major command level. To insure that a good professional example is set for junior Dental Corps officers, the director of Dental Services will devote part of his duty hours to direct patient care. Within the limits of Army policy, dental programs at individual installations will be tailored to meet the particular needs of that segment of the Army community. The success of this program, based on efficiently using available resources rather than increasing expenditures, is demonstrated by a 26 percent rise is productivity between fiscal years 1975 and 1976, a period marked by a 3 percent decline in dental staffing.

At the end of 1976 the U.S. Army Veterinary Service consisted of 397 officers, 1,167 veterinary specialists, and 281 animal specialists. Of the career officers, approximately 45 percent have board certifications in one of the recognized veterinary medical specialities, a figure that compares favorably with the national average of 5 percent. Apart from other duties, members of the Veterinary Service inspected approximately 15.6 billion pounds of food, of which 560 million pounds were inspected at contractors' plants.

In June 1976 the Department of Defense put into operation the Tri-Service Medical Information System (TRIMIS), whose purpose is to make use of existing automatic data processing technology to improve the efficiency of health care delivery in the armed forces. Using standard equipment and programs adaptable to medical facilities of varying sizes and types, this system will help accomplish three crucial tasks: (1) the transmission of more timely and reliable health care information; (2) improvement of medical training and professional development through accurate documentation of clinical decision processes; and (3) provision of better support for clinical and epidemiological research. The various TRIMIS subsystems will contribute to the achievement of those goals by handling patient records and using the records to build a data base, improving procedures for putting patients in touch with the medical persons

most qualified to help them, providing more efficient ward support for professional personnel, improving pharmaceutical services, making possible more rapid health and nutritional analyses of hospital food selection, producing greater efficiency in clinical laboratory and radiological work, and scheduling all logistic support for health care facilities.

The U.S. Army Health Facility Planning Agency was activated in September 1975. Composed of health facilities planners, architects, engineers, and a system analyst, this agency is responsible for planning, programming, budgeting, and supervising the construction of all Army health and dental facilities. The director of the agency also serves as manager of the Army Health Facility Program, which is responsible for the medical portion of the Army military construction program. The most important activity supervised by these institutions and individuals is the Health Facilities Modernization Program, established to provide new or renovated treatment facilities at military installations. This program has begun to make a measurable impact on the quality of Army medical and dental services. Since the start of the program in 1974, funds have been made available for twelve hospitals and fifteen dental clinics, which are now in varying stages of completion. The present estimated cost of the program over its ten-year life is $1.3 billion. The benefits of replacing decrepit facilities and modernizing serviceable ones have been felt in improved methods of care, accommodation of increased work loads, and compliance with stringent professional and hospital accreditation requirements and life safety codes.

Perhaps the most critical requirement for the next few years will be the replacement of the outdated, deteriorated buildings that presently house many of the Army's dental clinics. Even after completion of the fifteen clinics presently under construction, almost half of the remaining clinics will still be in temporary facilities. To alleviate this situation, and to make better use of dentists and their assistants, the Assistant Surgeon General for Dental Services has developed a plan to build central dental clinics of appropriate size on each installation, consolidating the resources of smaller, more dispersed clinics. This plan and the programmed concentration on dental facilities in fiscal years 1978 and 1979 should significantly improve the level of care provided by the Army's scarce dental resources.

In February 1976, U.S. Army Medical support units went to Guatemala to help care for the victims of the earthquake that had struck that country. The units dispatched included the 47th Field Hospital, Fort Sill, Oklahoma; the 105th Medical Detachment, Fort Dix, New Jersey; the 155th Medical Detachment, Fort Bragg, North Carolina; members

of the 36th Medical Battalion, Fort Hood, Texas; and a composite laboratory augmentation team. Soldiers of these units were active in the rescue effort during the hectic days that followed the catastrophe. When the immediate medical crisis had subsided, two weeks after the earthquake occurred, the units began to return to the United States.

Memorial Affairs

The bodies of nine soldiers and airmen from World War II were discovered and identified during the fiscal year. Five were recovered from a plane crash in the Zuider Zee, Holland, two from France, and two from Germany. Individual disposition of the bodies took place in accordance with requests from next of kin. Two soldiers from the Korean War were also discovered, individually identified, and returned to their homeland of Puerto Rico. The Central Identification Laboratory, Thailand (later moved to Hawaii), was able to identify the bodies of fifteen servicemen previously recovered from Southeast Asia. They include Army, Air Force, Navy, Marine Corps, and Merchant Marine personnel, and in each case the parent service took responsibility for disposition.

Resolution of the status of soldiers listed as prisoners of war or missing in Southeast Asia continued to be a matter of general concern. As of 30 September 1976, 217 men were still listed as missing, 161 of whom were missing in action. Another twelve were listed as captured. On 11 September 1975 the House of Representatives established a select committee, chaired by Congressman C. V. Montgomery, to investigate the issue of captured and missing soldiers. The Army provided technical assistance to the committee. At the urging of the National League of Families, the committee's original one-year tenure was extended to 3 January 1977, when it will complete its work and render a final report.

In response to a 1974 federal district court decision in *McDonald* v. *McLucas,* the services modified their procedures for reviewing the status of captured and missing soldiers to conform with legal due process requirements. The services also suspended status reviews pending the final report of the House of Representatives select committee, except where such reviews were requested by the primary next of kin. The Army conducted thirty-one requested status reviews, three of which were prompted by the recovery of more bodies.

As a result of the political situation in Thailand, the Central Identification Laboratory, Thailand, was transferred to Kapalama Military Reservation, Hawaii. The transfer and concurrent discontinuance of the parent unit (U.S. MACTHAI Support Group) made necessary a resubordination of the laboratory to The Adjutant General Center, where it is under

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the administrative and operational supervision of the Memorial Affairs Division.

Since approval of the master plan for Arlington National Cemetery in 1967, Congress has appropriated $20.3 million for its completion. The plan includes twenty-four major construction projects, of which twenty had been completed by 30 September 1976. During the fiscal year more than $738,000 was spent on landscaping, a boundary wall and fence, road repair, designs for a 50,000-niche modular columbarium, and surveys and designs for a permanent visitors' center and parking structure. While work on the master plan was going forward, the White House proposed that space for parking 6,000 cars be made available at South Post, Fort Myer, for the Bicentennial events in the Washington area. Because South Post is an integral part of the planned expansion of Arlington National Cemetery, the Army was concerned that a large parking lot might set back implementation of the master plan. Eventually, forty acres of South Post with a capacity of 4,000 cars was made available, with the understanding that the land would be restored as nearly as possible to its original state and returned to Army control not later than 31 March 1977, so that work on the master plan could continue.

The criteria for interment in Arlington National Cemetery, adopted in 1967, limit burial to Medal of Honor recipients, active duty and retired members of the armed forces, veterans who have served in major posts in the federal government, and the spouses and dependent children of such persons. At the time these restrictive standards were adopted space in Arlington was nearly exhausted. The criteria, however, have not been universally popular, and during the fiscal year the Department of the Army opposed a bill that would have opened the cemetery to all veterans and their survivors. The Army pointed out that an open eligibility policy would mean approximately sixty burials per day, a rate that would conflict with the requirements of serving tourists and supporting ceremonies and would create impossible strains on Arlington's traffic pattern and manpower resources. Moreover, open eligibility would exhaust the cemetery's expanded burial space by 1985, whereas the current policy is expected to keep Arlington open until about 2028.

In response to congressional interest in the matter, the Secretary of the Army reviewed the existing criteria to see if the expansion of the cemetery's grounds that has taken place since 1967 made some changes possible. The review produced a conclusion that some expansion of the criteria was in order. The Department of the Army therefore proposed that eligibility also be extended to medically discharged veterans (30 percent disability or greater) and recipients of the Distinguished Service Cross, the Distinguished Service Medal, the Silver Star, and the Purple

Heart. Upon approval by the Secretary of Defense, the relevant regulations will be changed accordingly.

During the last fiscal year the Army revised its regulation governing the processing of casualties. The revision adds instructions on processing U.S. Army Reserve and Army National Guard death cases, refines casualty procedures, and makes a noteworthy change requiring personal notification of parents who are secondary next of kin to a deceased service member. The Casualty Services Division, Personal Affairs Directorate of The Adjutant General Center, processed 2,008 active duty cases, 6,922 retiree cases, and 1,509 very seriously ill and seriously ill cases from overseas commands. It also processed 1,050,298 records of emergency data.

X. Research, Development, and Acquisition

The Army maintained a strong research, development, testing, and evaluation (RDT&E) program during the period of this report to sustain the total materiel acquisition process and to assure that the American soldier was equipped and supported with modern weapons of high quality. The escalating cost of new weapons systems and the competition of other national priorities for adequate funding did not however, abate. To meet this challenge the Army placed a premium on efficiency in RDT&E management and materiel purchasing.

Budget and Management

The president's fiscal year 1976 budget requested $2,181.7 million for the Army's RDT&E program; however, Congress reduced the amount to $1,970.4 million, which consisted of $1,853 million in research and development and $117 million in operational systems development. The congressional cutbacks resulted in modifications to a number of development programs, involving weapons, intelligence and communications, and research in the areas of manpower and human resources. In addition, the Department of Defense deferred a number of projects dealing with advanced forward area air defense, the ballistic missile defense advanced technology program, site defense, surface-to-air missiles, surveillance, target acquisition, and night observation, and major range and test facilities.

Based upon fiscal guidance provided by the Army's Budget Review Committee, the Office of the Deputy Chief of Staff for Research, Development, and Acquisition limited its funding request for fiscal year 1977 to $2,501 million; the office also submitted several unfunded requirements to the committee and requested that they be funded. The Army's Budget Review Committee responded by raising the funded figure to $2,560 million, which was included in the Army's budget submission to the Department of Defense, but program and budget decisions by Defense and the Office of Management and Budget reduced the request to $2,376 million. In the fiscal year 1977 Department of Defense Appropriation Act, Congress provided $2,280.8 million in appropriations and $9.9 million for RDT&E surcharges on foreign military sales.

Before the end of the reporting period, work on the fiscal year 1978 RDT&E budget request was well under way. In September 1976, the

Office of the Deputy Chief of Staff for Research, Development, and Acquisition submitted a request of $2,740 million to the budget committee for review.

Congress authorized $25.5 million for military construction in support of the RDT&E program for fiscal year 1976, but appropriated only $13.9 million for this purpose. Major projects funded were an animal research isolation facility at Aberdeen Proving Grounds ($7 million) and mobile optical equipment sites at White Sands Missile Range ($2.3 million). The Aeromedical Research Laboratory, Fort Rucker, Alabama, a $9.1 million project, was authorized but not funded.

Based upon planning and programming guidance furnished by the Defense Department in early February 1976, the Army developed a Program Objective Memorandum that included the following amounts for research, development, testing, and evaluation:

Fiscal Year:	1976	1976 Transition Quarter	1977	1978	1979	1980	1981
Amount (in millions of dollars)	2,189.4	585.6	2,370.9	2,542.0	2,778.3	2,936.9	3,190.1

For some time the project manager has been a principal in developing new weapons systems. Usually a colonel or a general officer, the project manager has been able to expedite the timely and economical development and delivery of weapons systems. Project managers also handle other complex programs, such as foreign military sales, materiel standardization, and expansion of the production base. Recently, the Army took a number of steps to improve the attractiveness of a career in project management. Selection of project managers is now handled in much the same way as officers are selected for troop command positions or promotion, and the position was raised to the equivalent of brigade command. The Army has also established a Project Manager Development Program to prepare officers for this level of responsibility by pointing them toward jobs in project managers' offices, research and development agencies, and positions related to materiel acquisition.

Cost reduction in materiel development was the major theme of sixteen senior-level seminars conducted for Defense and private industry managers during the spring of 1976. Specifically, the seminars focused on requirements, program strategies and constraints, cost and schedule estimating, selection of contractors, and contract implementation and management. They succeeded in bringing to the forefront policy and management deficiencies and the need for an early awareness of technical problems. The lessons learned and management techniques derived from the seminars should improve the Army's materiel acquisition process and provide better and less expensive equipment for the American soldier.

To help keep costs in line the Army used the Total Risk Assessing Cost Estimate, which assured more thorough consideration of risk and uncertainty in estimating costs. The technique was applied to all major development programs, with the result that ten fiscal year 1977 and nineteen fiscal year 1978 cost estimates have been revised.

The Modernized Army Research and Development System began prototype evaluation tests, which should be completed during the first half of fiscal year 1977. It will provide research and development managers at all levels with performance, schedule, and resource information.

On 14 April 1976, the research and development element of the Army staff directed the Army Research Development and Acquisition Information Systems Agency to begin work on a new system. Called the Standard Army Research, Development, and Acquisition System, it will provide comprehensive information to support the full range of Army programs in the areas of research, development, testing, evaluation, and acquisition. It will integrate and improve Army automated data systems used in the development of the cycle for the planning, programming, and budgeting system. In addition, it will identify alternatives for allocating funds with regard to appropriations, functional areas, priority categories, individual projects, and procurement line items.

Research and Technology

During the past year the Army supported programs covering a wide range of disciplines involving basic and applied research, exploratory development, and a limited amount of advanced development. The objective of these programs was to expand the science and technology base and provide the building blocks for new and improved weapons, systems, materiel items, and methodologies.

The Army published the first edition of the Science and Technology Objective Guide (STOG) in May 1976 to provide governmental, industrial, and educational research facilities with a single source of guidance for developing science and technology programs that meet Army needs and priorities. It will also enhance communication between those facilities and Army operational agencies, and help management measure progress in the science and technology base. The guide is to be revised annually and will replace all other Army research requirement documents. The Army Scientific Advisory Panel met in July 1976 and examined the relationship between the STOG and Army laboratories, specifically seeking to determine whether the laboratories' technological research would lead to desired system capabilities. The results of this effort will be included in the next edition of the guide.

A part of the military engineering research and development program during the past year was obtaining the technology needed to develop

components for the Army Terrain Information System (ARTINS), an automated system that will provide rapid and accurate terrain intelligence to commanders in the field. Research was centered at the Army's Engineer Topographic Laboratories. This system will be tied in to the corps-level Tactical Operations System and will draw information from a continuously updated data base through a number of specialized programs, each of which would deal with a specific item of intelligence, including cross-country speed, line of sight, cover and concealment, and fields of fire.

The ARTINS cross-country speed prediction program will incorporate computer aided terrain mobility analysis techniques that the U.S. Army Engineer Waterways Experiment Station has developed. These techniques can provide cross-country speed predictions based upon terrain testing, vehicle identity, and weather conditions. Under the ARTINS adaptation, a tactical mobility problem would be fed into a corps- or division-level computer. A graphic response on a high-speed printer would then be fed through a high-speed copier to produce transparent overlays for military maps. Use of a cathode-ray tube would provide even more rapid displays.

The Engineer Topographic Laboratories also demonstrated the feasibility of a digital data editing system that can eliminate up to seven-eighths of the editing time required in the production or revision of topographic maps. Known as DIODE, for digital input/output display equipment, the system was installed at the Defense Mapping Agency Topographic Center, where it will undergo engineer and service tests.

During the year, Army scientists evaluated commercially available remote ceiling and visibility sensors under various atmospheric conditions to determine their utility in meeting the Army's need for such a device to support both low-flying, close-support, fixed- and rotary-wing aircraft operations and artillery operations. The evaluators determined that the commercial products were too large and too costly and that an AN/GVS–S laser range finder modified to perform measurements of cloud heights would be a better alternative. By 30 September 1976 the Atmospheric Science Laboratory and the Combat Surveillance and Target Acquisition Laboratory had completed design work on the modified range finder, and construction of a model was under way.

In other atmospheric science matters, tests conducted during the year showed that polar orbiting meteorological satellites gave more precise vertical temperature radiometer data on upper wind fields to calculate nuclear fallout winds from satellites system to bring this prediction capa-parachute from high-altitude balloons. The Army has begun work on the nuclear fallout winds from satellites system to bring this prediction capa-

bility to the field commander; also, a new cloud-screening system moved from exploratory to advanced development.

In its research on bulk explosives, the Army concentrated on defining system concepts for requirements such as a conventional alternative to the atomic demolition munition, and it reviewed the current status of commercial explosives development as well. The Engineer Waterways Experiment Station conducted tests in various climate and soil conditions to determine spacing, depth of burial, and size of charges required to provide the most efficiency in antitank ditching. All work was under the Military Engineering Applications of Commercial Explosives program. A technology transfer report on antitank ditching with explosives got under way, with completion expected in December 1976.

In the civil works area, ice engineering research activities during the reporting period included an extension of field and laboratory tests on techniques for deicing lock walls. Test results indicate that the use of a chemical coating on the lock walls will provide an effective means of deicing, as will the use of ice booms. Construction of the $6.7 million Ice Engineering Facility at the Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire, continued. The facility, which is scheduled for completion in December 1978, will include a refrigerated test basin, a recirculating refrigerated flume, and a large cold room. The facility will provide for the first time a controlled environment in which a variety of solutions to ice problems can be simulated without resorting to costly field evaluations.

Highlighting the Army's Human Resources Research Program during the reporting period was the initiation of a major field test to determine whether the number of female soldiers in a military unit had a measurable impact on unit performance. Work continued on a joint human resources and medical research effort related to helicopter aviation. New research will emphasize subjects related to unit training and the role of women in the Army.

The two aircraft research projects involving the Army and the National Aeronautics and Space Administration moved forward during the year. Additional components of the XV–15, tilt rotor research aircraft, were built and tested, and the first prototype XV–15 was transported to the Bell Helicopter Textron flight test facility for completion of assembly and integrated systems testing. The first rotor systems research aircraft was ready for testing on 7 June 1976. Readiness reviews for helicopter flight tests and escape system sled tests were finished, and the first of five escape system sled tests was completed on 22 September 1976.

Flight testing of the XH–59, advancing blade aircraft, resumed during the year. The tests confirmed certain advantages and shortcomings of the advancing blade concept, which is a coaxial counterrotating, hinge-

less rotor system. The aircraft control system was quite responsive, noise levels were low, retreating blade stall was virtually eliminated, and hover performance was improved by the absence of a tail rotor. Structural loads in the rotor and control system ranged from low to moderate and indicated potential for substantial weight reduction. Weak directional control power in partial power descents and autorotation was observed. In future testing, improvements in autorotation directional control at low collective settings and high flare angles will be emphasized.

In the area of avionics, attention centered on efforts to improve nap-of-the-earth (NOE) operations, especially at night and under adverse weather conditions. At the close of the reporting period plans were under way to test a number of alternatives that showed promise of improving NOE communications. The Laser Obstacle Terrain Avoidance Warning System came through flight testing successfully during the year. Meanwhile, the AN/ASN–128 Doppler navigation subsystem, which will be used in the utility tactical transport aircraft system and in AH–15 helicopters, neared the end of competitive engineering development.

Also successfully completed during the past year was the small turbine advanced gas generator program, which developed gas generator technology for advanced aircraft engines and auxiliary power units in the 200 to 800 shaft horsepower (SHP) range. All technical objectives were met or exceeded. In a related development, a program was started for an 800 SHP advanced technology demonstrator engine that will provide significant improvements in fuel consumption and horsepower and will be less vulnerable and easier to produce and maintain. Development contracts were also awarded for advanced transmission components for 1980–90 aircraft.

The Army made a number of gains in developing aircraft survivability equipment during 1 July 1975–30 September 1976. These included painting approximately 1,400 aircraft with a new, low-reflectance paint, approval of low-glint canopies for observation and attack helicopters, and the development and operational testing of infrared suppressors for OH–58 observation helicopters and RU–21 fixed-wing aircraft. A number of items dealing with aircraft electronic warfare self-protection were in various stages of advanced or engineering development, including optical warning location and detection devices, infrared jammers for fixed- and rotary-wing aircraft, a lightweight radar jammer for helicopters, general purpose chaff and flare dispensers for fixed-wing aircraft and helicopters, and the missile launch detector system. The Army added two new electronic warfare equipment items to its inventory during the past year: the AN/APR–39(V)1 radar warning receiver for helicopters and the AN/ALR–46 radar warning receiver for fixed-wing aircraft, which the Air Force procured for the Army.

During the past year flight tests were completed on an all-composite, multitubular spar for the AH–1G's main rotor blade. Simulated tests using a helicopter equipped with an advanced cyclic electrothermal rotor blade system were conducted on the Canadian National Research Council's Ottawa spray rig, and prototype development was begun on synthetic and operations flight training simulators for the CH–47 cargo helicopter (2B31), the AH–1 attack helicopter (2B33), and the UH–60 utility tactical transport aircraft system (2B38).

Improvements were made in the way of airdrop equipment. Installation of an anti-inversion modification on the Army's main personnel parachutes, TIO and MCl–1, was well under way. Eighty percent of all field stocks were modified during fiscal year 1976. With this change the Army expects to correct a malfunction that accounted for 95 percent of all parachute failures. A Dragon missile jump pack prototype has been developed that allows the paratrooper to use both the Dragon and his M16 rifle immediately upon landing. A rigging system was also developed during the past year that allows airdrop of supplies and equipment to Navy ships at sea.

Development

The Army's tactical nuclear weapons modernization program included a number of projects to improve NATO's nuclear forces. The new eight-inch nuclear projectile, keystone of the modernization program, was a joint Army and Energy Research and Development Administration undertaking. The projectile will be able to destroy company-size armored formations. During the past year, the Energy Research and Development Administration completed successful structural and functional firings of the warhead and the firing of set designs and also confirmed the safety of the projectile. In another project the Army determined that there was a need for a 155-mm. nuclear projectile for use with new NATO and U.S. howitzers of extended range. The Army also started modernization projects for the Lance and Pershing missiles.

In the field of electronic warfare, engineering development of several systems neared completion and were scheduled to begin Phase II, operation and development testing. The antiradiation missile program was expanded to include development of generic antiradiation missile seekers and field test instrumentation for antiradiation missile tests.

The first field test of the Tactical Operations System was begun in March 1976, but was suspended in mid-April because of the problems encountered in the software. Since that time emphasis has been placed on correcting deficiencies in preparation for a resumption of software and hardware integration testing.

The problems that had beset the development of the Dragon night sight (AN/TAS–5) were alleviated as the redesign of the system's inte-

grated sight and tracker device neared completion. In other night-vision actions, the TOW (AN/TAS–4) performed well during Phase II development testing, the long-range night observation device began the second phase of development and operational testing, prototypes of the tank infrared elbow were fabricated, and a production plan was approved for infrared common modules that should reduce development and production costs for both man-portable and vehicular infrared systems. For image intensification devices, production was under way for a number of second-generation systems that use microchannel plates, which are smaller and lighter than their predecessors.

Following the completion of competitive testing, Hughes Aircraft Company received the contract for producing the artillery locating radar (AN/TPQ–37). The company also completed all five engineering development models of the mortar locating radar (AN/TPQ–36). Product qualification testing at Yuma Proving Ground was successfully completed on four of the five models. Comparative test and evaluation of the AN/TPQ–36 and the Marine Corps hostile weapons locating system was conducted and the Marine Corps decided to terminate the project.

In other actions related to command, control, and surveillance, the Stand-Off Target Acquisition System continued to perform well under a variety of test situations, and plans for an expedited program to provide interim equipment for Europe were being prepared. The Air Defense Command and Control System (AN/TSQ–73) was installed at the Air Defense School for training and for joint testing of the Tactical Air Control Systems/Tactical Air Defense Systems, and a new digital message device was developed for the Tactical Fire Direction System.

The advanced attack helicopter (AAH), a twin engine, single rotor helicopter designed specifically for use against tanks, remained one of the Army's high-priority items. Contractors completed developmental flight tests on the AAH airframe, and four prototype aircraft were delivered to the Army in May 1976. Competitive testing was completed in September and selection of a winner was expected in December.

In February 1976, the Defense System Acquisition Review Council approved the full-scale development of the Hellfire modular missile system as the primary antitank weapon on the advanced attack helicopter. This decision followed cost and operational effectiveness analyses that indicated an advanced attack helicopter armed with the Hellfire missile would be more effective than one armed with the TOW. Following the review council decision for the Hellfire missile development, a request for proposals was released. Proposals from Hughes Aircraft Company and Rockwell International were under evaluation at the close of the reporting period.

After slightly less than four years of development and approximately 700 hours of contractor flight testing, the Army accepted the Boeing Vertol and Sikorsky utility tactical transport aircraft system prototypes for competitive evaluation on 20 March 1976. During the flight evaluation, which will continue through November 1976, the Army's attention will focus on operational suitability and logistic support of the prototypes. A Source Selection Evaluation Board composed of approximately 150 military and civilian members convened in May to evaluate production proposals submitted by two competing companies. Test data and results from the four-year development phase and the competitive test phase are being used by the Source Selection Board in analyzing the proposals. Field testing of the General Electric T–700 engine, which will power both the utility tactical transport aircraft and the advanced attack helicopter, continued to show good results.

Other new Army aircraft development programs did not fare so well during the past year. Efforts to establish an advanced scout helicopter (ASH) program first met with delays. Then Congress declined to provide fiscal year 1977 funding for the project, which led to the closing down of the ASH Project Manager's Office on 30 September 1976. Fabrication of a heavy lift helicopter prototype continued.

The program to modify 290 AH–1G Cobras to the Cobra/TOW configuration and the procurement program for 305 new Cobra/TOW (AH–1S) aircraft made good progress. Milestones reached in the modification program included completing the initial production test, fielding of support equipment, and training of personnel, all in January 1976; deploying the modified aircraft to Europe in February; attaining a production goal of fifteen aircraft per month in April; and completing an accelerated 600-hour reliability, availability, and maintainability test in May. A procurement contract for the AH–1S aircraft was awarded in December 1975, first flight with the improved main rotor blade was conducted in July 1976, and development contracts for an improved turret and a wing stores management and remote set fusing system were let in June 1976.

The Defense System Acquisition Review Council reviewed the CH–47 modernization program in October 1975 and approved a program to design, test, and flight-qualify three prototype aircraft. After increased funding had been approved, the Army awarded an engineering development contract to Boeing Vertol in June 1976. Preliminary and critical design reviews were conducted on schedule, and at the close of the reporting period work was proceeding on design of the transmissions, hydraulic, and flight control systems.

Regarding new components for the TOW system, Texas Instruments received a contract in October 1975 for engineering development of the

TOW thermal night sight. Development continued on an improved TOW vehicle and cover to protect the weapon and crew against artillery fragments and small arms fire.

McDonnell Douglas received a high-rate production contract for the Dragon missile system in August 1975, and other firms signed contracts for Dragon day trackers and missiles. In other Dragon matters, engineering development of a second-generation thermal night sight, the Night Tracker, began in late September 1976, a requirement for a viscous-damped mount to improve Dragon accuracy was established and development of a new launch simulator for training got under way.

Following successful proof of principal flight tests and favorable reviews by the Army and the Office of the Secretary of Defense, the SAM–D missile program once again entered full-scale engineering development. In May 1976 the revived program took on a new name—Patriot. A major modification to the Patriot contract in August 1976 authorized completion of full-scale engineering development at an additional cost of $425 million. Shipment of the first tactical prototype Patriot fire control section from the contractor to White Sands Missile Range was completed in June, with the equipment performing successfully in search and track missions against a manned aircraft.

The improved Chaparral missile entered production during the past year, and two additional improvements, an electronic target identification device and a smokeless missile motor, were on schedule and within cost estimates. A project to reduce sun glint given off by the transparent canopy that protects the gunner got started, but was later terminated because of funding restraints and indications that the problem was not as severe as originally believed. The Army also completed plans to demonstrate an all-weather version of Chaparral.

In other missile matters the Vice Chief of Staff approved twelve new product improvements for the Hawk missile in April 1976, the Pershing II development program continued on schedule, the Stinger air defense missile neared the end of a highly successful engineering development, and the nonnuclear Lance program progressed. High costs associated with developing the Roland missile led to a review of the program and a renegotiation of the development contract. By the end of September 1976, work on the Roland was progressing satisfactorily and was holding to new development cost projections of $265 million.

Testing of XM1 tank prototypes during the February–May 1976 demonstrated that both the Chrysler and General Motors models met or exceeded Army requirements. In accordance with agreements between the United States and the Federal Republic of Germany and with NATO standardization policy, the Army postponed selection of a winner until

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it had completed an investigation of concepts incorporating selected components of the German Leopard 2 tank into the XM1.

The program to make the M48 tank look like and fight like the M60 tank continued, and, by the end of September 1976, 401 M48's had been converted to the new M48A5 configuration. Preliminary study, design, fabrication, and testing of forty-nine improvements for the M551 tank were completed, and contracts for the improvements kits were awarded. The Army also signed contracts for laser range finders and solid state ballistic computers that will be placed in the M60A1 tank, which will be redesignated the M60A3. Test results and cost effectiveness analyses indicate that these two improvements, along with the addition of new, passive night sights, will increase the M60's fighting capability by over 30 percent.

The mechanized infantry combat vehicle (MICV) program continued in engineering development throughout the reporting period. Difficulties with the transmission were not resolved, and the backup Allison transmission moved into consideration as an alternative to the problem-plagued General Electric transmission. A special task force, convened at the direction of the Secretary of the Army to review the project, confirmed the need for the infantry combat vehicle, but recommended that command and control of the vehicle be placed in a separate, two-man weapon station. These recommendations, which would permit the use of a common vehicle for MICV command and control and for reconnaissance operations, will be presented to the Secretary of the Army for approval early in fiscal year 1977.

During the year, the Army established the requirement for the development of a new medium-caliber air defense gun that would be able to move with and provide close air defense support for armor and mechanized forces. The new gun would be fielded in the 1980's and would be organic to all Army divisions, except airmobile and airborne divisions, which will retain an improved Vulcan air defense gun.

Following a general officer review in February 1976, the Army decided to extend development of the XM204 light towed 105-mm. howitzer for one more year to insure that the hop and side slope problems observed during operational testing had been eliminated. The validity of a 105-mm. howitzer was confirmed by another general officer review in August 1976; however, the following month a study was begun to determine what type of light unit direct support weapon will be needed in the future.

In other howitzer matters, the XM198 medium towed 155-mm. howitzer remained in the second phase of development testing. Minor problems and defects in the traversing and elevating mechanisms were corrected. Overall performance was good and a general officer review

in August 1976 recommended that the howitzer be type classified. The M110E2 heavy self-propelled eight-inch howitzer was redesignated the M110A1 and adopted as standard in March 1976; in September, Watervliet Arsenal completed the first production run of the new cannon. Development of a muzzle brake and reduced flash propellant for use with the M110A1 began during the year.

The Copperhead, a terminally guided 155-mm. projectile designed to provide field artillery units additional capability to destroy stationary and moving hard-point targets, underwent a number of design changes during engineering development. These included the addition of folding wings that permit the projectile to fly under relatively low cloud cover and maneuver toward a target and the use of plastic components rather than metal ones wherever possible. The Copperhead is being developed so that it can be fired like any other artillery ammunition. For this reason, howitzer crews will not need additional training.

With regard to scatterable mines, the artillery-delivered antipersonnel mine was accepted for Army use and entered production. Development of the artillery-delivered antitank mine continued, and test firings of dummy rounds and reliability tests on mine components were started. The ground-emplaced mine scattering system completed engineer design tests, and prototypes of the dispenser were fabricated. The development program for the Gator mine, which includes an air-delivered antitank and antipersonnel mine, was transferred from the Air Force to the Army by the Department of Defense; design concepts have been developed, and test hardware has been procured.

In other development matters, Phase II operational and development tests were completed for the lightweight company mortar system, and development of the XM235 squad automatic weapon continued to make good progress.

International Research and Development

On 1 July 1975, responsibility for day-to-day management of international research and development matters was transferred from the Army staff to what is now the Army Materiel Development and Readiness Command. The Office of the Deputy Chief of Staff for Research, Development, and Acquisition retained responsibility for international military research and development matters and provided the Development and Readiness Command with policy guidance for overseeing the program.

The North Atlantic Treaty Organization (NATO) took several initiatives during the year in the area of standardization. An Ad Hoc Committee on Interoperability was created to pursue standardization in tactical communications, cross servicing, tank gun ammunition, and fuels

and to implement NATO standardization agreements. An Armaments Standardization and Interoperability Division was also established to promote standardization and interoperability. NATO endorsed a plan to study and develop a periodic armaments planning system to insure the interoperability of future equipment. As a starting point for the study, NATO members were invited to submit a tentative list of their national plans for main armaments procurement over the next five years in an effort to develop an integrated equipment replacement schedule.

Cooperative research and development within NATO during the past year has resulted in encouraging progress in a number of key programs. The United States and the Federal Republic of Germany are conducting bilateral studies on the future role of surface-to-air missiles with the aim of achieving interoperability and standardization of future ground-based air defense weapons. The United States is currently testing subsystems of the German Leopard 2 to achieve maximum standardization between the Leopard 2 and the XM1. In mid-1976 the United States entered into separate agreements with Germany and Great Britain to follow up the 1975 Tank Main Armament Evaluation Program with further tests of 105-mm. and 120-mm. tank guns; the United States is also participating in a NATO small arms test and evaluation program to select a second NATO standard cartridge and standard rifle. American 155-mm. howitzer projectiles and propellants currently under development are being designed to conform to the standards set forth in a standardization Memorandum of Understanding ratified by the United States, Germany, Great Britain, and Italy.

Outside NATO, the Army gave Australia a prototype XM204 towed 105-mm. howitzer and an XM198 towed 155-mm. howitzer for testing and evaluation. Indications to date are that the Australians have been impressed with their performance and may wish to procure either or both to modernize their field artillery.

Materiel Acquisition

President Ford requested $362.3 million for Army aircraft procurement in his fiscal year 1976 budget message to Congress. Of this amount, $122 million was for new aircraft, $127.7 million for modifications, $54.2 million for spare and repair parts, and $58.4 million for support equipment and facilites. For the period 1 July–30 September 1976, the president requested $59.4 million under the Aircraft Procurement, Army, appropriation. Major procurement actions taken during the period included a December 1975 contract for thirty-eight new AH–15 Cobra/

TOW helicopters and a July 1976 contract for twenty-two more. A contract for two UV–18A's, Twin Otter aircraft, was awarded in January 1976. The UV–18A was procured off-the-shelf for the Army National Guard in Alaska to provide year-round command, administrative, and logistic support between the 1st and 2d Scout Battalion headquarters and remote villages throughout western and northern Alaska.

The president's fiscal year 1976 budget proposed $460.8 million for Army missile procurement. From this request Congress deleted $34.2 million—$6 million from the Hawk procurement request, $1 million from Lance, $3.4 million from the AN/TSQ–73 missile finder, and $23.8 million from the Interim Airborne Target Acquisition System.

The Army accepted 10,754 Dragon missiles and 754 trackers during 1 July 1975–30 September 1976. In September 1976, the Army awarded "winner-take-all" multiyear contracts to Raytheon for missiles and to Kollsman Instruments for trackers at substantial savings over the previous dual-source prices. The production capacity of the winners will allow each to satisfy anticipated Dragon procurement by January 1978. International interest in buying Dragon missiles increased to six countries, with orders totaling about $336 million.

In other missile procurement matters, accelerated production of the TOW missile continued during the fifteen-month period, and 21,419 missiles and 1,382 launchers were delivered. A low-rate production contract for the TOW night sight is scheduled to be awarded to Texas Instruments in March 1977, with deliveries starting in May 1978. Attention given to foreign military sales continued, with orders from twenty countries totaling approximately $469 million. The improved Chaparral missile entered production, and a production contract was let for fifty-two Chaparral fire units. Foreign sales of the Chaparral continued to be high. The Improved Hawk missile procurement program provided triangular air defense battery sets for three Hawk batteries, and for procurement of 520 Improved Hawk missiles at a total cost to the Army of $71.8 million.

The major procurement activity for weapons and tracked combat vehicles remained the acceleration of tank production. The average monthly production rate for the M60 tank rose from fifty-four in calendar year 1975 to seventy-four in calendar year 1976. The 885 M60A1 tanks produced during the fifteen-month period exceeded programmed production by nine tanks.

In support of the Army's accelerated tank production program, Blaw Knox Company's East Chicago foundry was turning out armor casting sets at a rate of seventy-five per month by the end of 1976, and its Wheeling, West Virginia, facility had begun to turn out turret and hull castings. The Chrysler hull and turret machine lines at the Army Tank Plant, Lima,

Ohio, were completed on schedule. By the end of 1976, Chrysler had machined twenty-three turrets and two hulls. The gun mount line established at the Army Tank Plant to augment production at Rock Island Arsenal, Illinois, began operations and met its thirty per month goal by producing 368 gun mounts during the year. By May 1976, Teledyne Continental had the ability to deliver 250 engines per month. To meet this pace, Detroit Diesel Allison Division increased its combined transmission and transmission kit production rate to 200 per month.

Ammunition procurement, as in fiscal year 1975, was limited by provisions of the Foreign Assistance Act that prohibited use of service funds to support allied requirements. Because of this curtailment, Congress reduced the amount originally requested for ammunition procurement for the period by over $100 million.

The sharp drop in ammunition production during the last two years affected the ammunition production base; numerous production lines and plants were inactivated and many people were laid off. This, in turn, led to increased cases of mothballing production equipment and maintaining unused facilities.

Despite these cutbacks, the Army continued a multibillion dollar program to modernize its ammunition production base of the World War II era. Congress appropriated $211.2 million in fiscal year 1976 and $148.1 million in the transition quarter for the modernization program out of the total ammunition production base program funding of $308.1 million and $166.6 million, respectively. Funds to begin construction of a new 155-mm. M483 improved conventional munition manufacturing complex at Bay St. Louis, Mississippi, were requested in fiscal year 1976. Although Congress appropriated $45.2 million for the initial funding of the complex, it also restricted the construction of new facilities to existing ammunition plant locations. Congress also appropriated $110.4 million to construct a new metal parts manufacturing facility for the 105-mm. projectile at the Lone Star Army Ammunition Plant, Texarkana, Texas. New production facilities were financed for the 155-mm. artillery-delivered scatterable mine munition, the M732 artillery proximity fuze, the new 105-mm. M735 kinetic energy tank round, and the 155-mm. improved conventional round and accompanying grenades. Design of a $500 million RDX/HMZ explosive manufacturing facility was begun with $7.4 million in fiscal year 1976 funds. The remaining dollars in the ammunition production base program supported active ammunition plants and an intensive manufacturing technology program.

The Other Procurement, Army, appropriation financed procurement of tactical and support vehicles, communications and electronics equip-

ment, and other support equipment. Appropriations for fiscal year 1976 and the transition quarter, by activity, were as follows:

Activity	Fiscal Year 1976 [1]	Transition Quarter [1]
	(In millions of dollars)	
Tactical and support vehicles	$212.9	$46.5
Communications and electronics equipment	354.0	68.2
Other support equipment	328.4	83.0
Total—Other Procurement, Army	895.3	197.7

[1] Figures are based on the fiscal year 1976 column of the president's budget for fiscal year 1978.

The Army made additional headway in its program to replace non-combat vehicles of military design with commercial ones, since the use of commercial vehicles lowers acquisition costs, eliminating expensive design and test phases. Long-range plans were made to convert selected portions of the tactical wheeled vehicle fleet to either a commercial truck or to a truck using primarily commercial components, such as engines, transmissions, and axles. Fiscal year 1976 purchases included 272 34-ton breakbulk/container semitrailers, 250 40-ton low-bed semitrailers, 13,375 1¼-ton pickup trucks, and 34 telephone maintenance trucks.

XI. Special Functions

Each year the Army carries out a variety of functions that affect the civil sector of the nation. These range from projects in flood control to the sponsorship of national rifle matches. Reflecting the same concerns that occupy the minds of most Americans, the Army has devoted much attention to such major problems as protection of the environment and the conservation of energy resources. The close relationship between the military and civilian segments of American society has become an important feature of the country's growth and development during the past two centuries.

Civil Works

Taking into account the importance of civil works projects to communities around the nation in terms of social and economic implications, the yearly sums appropriated for this purpose are of considerable interest. For the fiscal year, civil works appropriations were funded at $2.2 billion and supplemental appropriations and transfers at $659 million. The breakdown of the appropriations by category is shown below.

CIVIL WORKS APPROPRIATIONS FOR FISCAL YEAR 1976 AND TRANSITION QUARTER (INCLUDES SUPPLEMENTAL APPROPRIATIONS AND TRANSFERS)

(In thousands of dollars)

Category	Fiscal Year 1976	1976 Transition Quarter
General Investigations	$66,836	$17,110
Construction, General	1,237,151	412,741
Operation & Maintenance, General	582,073	153,116
Flood Control, Mississippi River and Tributaries	205,147	60,300
Flood Control & Coastal Emergencies	40,000	3,750
Permanent Appropriations	7,097	—
Special Recreation Use Fees	1,200	—
General Expense	43,700	11,050
Revolving Fund	700	950
Total	2,183,904	659,017

The largest appropriation, General Construction, included funds for the following planning and construction projects:

BREAKDOWN OF GENERAL CONSTRUCTION PROJECTS

	Fiscal Year 1976	1976 Transition Quarter
Preconstruction Planning Projects	(117)	(87)
New Starts	25	0
Continuing	68	81
Special	1	0
Completions	23	6
Construction Projects	(264)	(231)
New Starts	18	0
Continuing	218	225
Special	1	1
Completions	27	5

Of the twenty-five new planning projects started over the last five quarters, the enterprise involving the largest federal investment was on the Arkansas River above John Martin Dam, Colorado, with a federal cost of $72.4 million. The project consists of eight separate undertakings, which together will provide flood control and recreation benefits along a substantial portion of the river. Of the eighteen construction projects started over the last five quarters, the most important, in terms of federal investment, was on the Park River in Connecticut, where federal expenditures will be $71 million. In conjunction with previous federally funded efforts, this local project for flood control will provide complete protection to especially valuable portions of the city of Hartford.

For many years the Corps of Engineers has administered a regulatory permit program that controls structures and work in the navigable waters of the United States. During the last fifteen months the corps received over 25,000 permit applications, issued over 20,000 permits, and denied 226 applications under this program. Pursuant to court order, the corps is now preparing to expand its regulatory work to include navigable waters and their tributaries, interstate waters, intrastate waters used for interstate recreation and commerce, all coastal waters and adjacent wetlands subject to the ebb and flow of tides, and lakes of five acres or larger.

In April 1976 the corps exercised its authority to deny applications for permits to fill more than two thousand acres of mangrove wetlands off Marco Island, Florida. But it granted a permit to continue the nearly completed operations involved in developing Collier Bay at Marco Island. These actions constitute perhaps the most significant decisions the corps has made since assuming responsibility for this kind of regulation at the end of the last century.

For several years, at a time when older structures needed more maintenance and the requirements for dredging were growing, funding limitations impaired the efficient operation of the corps' navigation program. The result often meant problems for shippers that were passed on to consumers in the form of higher prices. In fiscal year 1976 the Office of Management and Budget and the Congress provided additional funds for dredging. This appropriation highlighted a change in the pattern of navigation expenditures over the past two years. During fiscal years 1975 and 1976, construction declined and operation and maintenance took a larger portion of the civil works budget.

For the last forty years the Corps of Engineers has had primary federal responsibility for studying flood problems and recommending solutions. The traditional method of meeting this responsibility has been to modify the behavior of floods. More recently, however, the corps, along with other members of the U.S. Water Resources Council, has recog-

nized that other techniques can reduce the potential for flood losses and at the same time be less harmful to the environment. Alternate techniques include land use regulations and permanent floodplain evacuation.

Because most floodplain management decisions are made at the local level, the Corps of Engineers operates a Flood Plain Management Services program that offers technical assistance and planning guidance to individuals and agencies at all levels of government. In 1976, the corps responded to 19,000 requests for information and assistance. The cost of this program has averaged $10.5 million in recent years.

During fiscal year 1976 the Army added more operations in disaster relief to its long record. In the Pacific northwest, heavy winter rains and unusually rapid melting of snow caused flooding throughout the Columbia River basin. Though short-lived, floodwaters destroyed numerous flood-protection structures and inundated thousands of acres of agricultural land. The Corps of Engineers spent more than $7 million, alone, in repairing the damaged flood-protection structures. In March and April 1976, when the city of Minot, North Dakota, faced the prospect of catastrophic flooding, the corps responded by building emergency levees that cost $7 million along a 25-mile stretch of river. No floodwaters reached the city, and losses estimated at $67 million were prevented. When the Teton Dam in Idaho failed, the corps stepped in to repair damaged flood-protection works, restore the hydraulic capacity of the Teton River, and help in the cleanup that followed the flood.

During fiscal year 1976 the Corps of Engineers managed over eleven million acres of land and water at its various water resource projects. Facilities at the corps' 419 operations were sufficient to support 376 million recreation days, the highest usage to date. The corps also stepped up its lakeshore management program by preparing plans for each of its lakes where private facilities exist. The purpose of the plans is to establish and maintain acceptable fish and wildlife habitats and to promote the safe use of shorelines by the public.

Several corps offices sponsored studies last year to evaluate possible manpower savings in using comparative (time-phased) aerial photography to monitor portions of the corps' regulatory program. A preliminary study by the Goodyear Aerospace Corporation suggested that this method of analysis was probably the most economical. The corps' New England office has used the technique to coordinate the regulation of the thirty-five flood control reservoirs in Connecticut, Massachusetts, New Hampshire, Rhode Island, and Vermont. Forty-one remote stations collect data on river stage, wind, air temperature, and water quality and relay the information to twenty-seven data collection platforms. The platforms transmit the data to the LANDSAT satellite, which in turn retransmits the data to the New England office's center in Boston. The rapidity with which the information is received makes possible more precise regulation

of the reservoirs. The corps' office in Vicksburg, Mississippi, is presently installing a similar system for the lower portion of the Mississippi River, and demonstrations have been given at other corps offices to help popularize use of the technique.

The Corps of Engineers currently operates and maintains sixty-five hydroelectric power projects with 295 generating units having an aggregate capacity of nearly 16 million kilowatts, or approximately 11 percent of the estimated conventional hydroelectric potential in the United States. During the fiscal year, corps power projects produced almost 108 billion kilowatts of net energy, an amount equivalent to the energy potential of more than 184 million barrels of oil. The revenue from this energy production was $271 million. Twelve new generating units came into service during the year, with a total capacity of 1 million kilowatts. Three of the units were added at the Ice Harbor project on the Snake River in Washington, 4 went into service at the Libby project in Montana, the first 2 units of the Carters project in Georgia went on line, and the Jones Bluff project in Alabama was completed with the installation of the last 3 units. Six new projects, with a potential of nearly 1 million kilowatts, are presently under construction. Additionally, as part of the country's effort to use as many renewable energy sources as possible, the corps is adding units, with nearly 3.5 million kilowatts total capacity, at eight existing sites.

The problem of streambank erosion in the United States has been a serious matter. A Corps of Engineers survey of the problem in 1968 and 1969 suggested that damage was occurring on more than half a million miles of streambank, and on 148,000 miles the degree of erosion was severe enough to require further study to determine whether corrective measures should be taken. In response to the problem, Congress passed the Streambank Erosion Control Evaluation and Demonstration Act of 1974 (Public Law 93–251), authorizing the Secretary of the Army to establish a national streambank erosion prevention program. The funds authorized were $50 million, and Congress is to receive a report on the matter by the end of 1981.

The program consists of (1) an evaluation of nationwide streambank erosion, (2) a survey and evaluation of literature dealing with bank protection methods, (3) hydraulic research on the effectiveness of various bank protection methods, (4) research on soil stability, (5) demonstration projects on selected rivers, and (6) the report to Congress. Presently a survey of the extent of streambank erosion is under way, the survey of literature is complete, and preparatory steps have been taken on the hydraulic and soils research programs. Sites for demonstration projects have been identified and approved, and construction at some of these sites has already begun.

The corps continued to operate training programs whose purpose is to disseminate information on water resource development activities to engineers and researchers from other countries. During the fiscal year the corps instructed twenty-eight trainees from Afghanistan, Argentina, Brazil, Burma, Egypt, India, Kenya, Mexico, Nicaragua, the Philippines, Rumania, South Africa, Sweden, and Taiwan. Typical subjects studied were river engineering and navigation, urban hydrology, fill dams and treatment of foundations, mathematical modeling of coastal areas, design techniques of hydraulic works, floodplain management, and the design of harbor and marine structures.

Environmental Protection and Preservation

The Army environmental program has met with limited success during the past fifteen months. Cutbacks in funds and personnel, increased opposition to Army projects, and failure to meet some compliance deadlines have combined to permit only modest gains in the field.

The budget request for fiscal year 1976 was $187 million for all environmental programs. Three-fourths of this amount was allocated for air and water pollution projects and environmental management. A number of the pollution control projects encountered delay or disruption because of inadequate funding or, in some cases, the withdrawal of funds. As a result, requirements without deadlines were not carried out, and some with deadlines were not completed on time.

The Army did conduct an inventory of all its fixed facility air pollution sources in accordance with the Environmental Protection Agency's (EPA) guidance of May 1975. The listing contains both major and minor emission sources subject to federal, state, or local limitations. A major emitter is one capable of putting more than 100 tons per year of a single pollutant into the atmosphere. Now that each Army installation has submitted an air pollutant emissions report to the Environmental Protection Agency, representatives of the Army, EPA, and the state concerned will determine whether antipollution standards are being met. When installations are in violation of these standards, they will develop compliance schedules in conjunction with EPA and state officials. The compliance schedules will be incorporated into consent agreements in accordance with EPA guidance.

The Army had no major difficulties with the Clean Air Act's provisions on vehicle emission standards. The manufacturers of commercially designed vehicles have to certify that they are observing current federal vehicle emission standards at the time of production, and Army tracked and combat vehicles do not have to meet these standards. In complying with emission specifications for light-duty military-design trucks (jeeps),

however, the Army did have to obtain a temporary exemption until December 1978 from the Environmental Protection Agency.

As one part of the program to reduce vehicle emissions, the Army began to switch from leaded to unleaded gasoline in the continental United States, Alaska, and Hawaii, but only seven installations completed the conversion by July 1975. With more unleaded gasoline available and with indications from the Army Research Laboratory at San Antonio, Texas, that Army vehicles could run successfully on unleaded gasoline, the process accelerated. By the end of September 1976, all installations had made the conversion.

In water pollution control, the Army's goal remained the same—to conserve water resources and to prevent contamination by controlling the release of pollutants. The Environmental Protection Agency has established specific levels of control required for discharges at Army point sources such as pipes, tunnels, conduits, ditches, channels, and the like. These levels are expressed in discharge permits for which the Army applies to the Environmental Protection Agency. Discharge permits specifying the levels of control are issued by this agency, and thus far, of the 307 permits required by Army installations, 257 final and 15 draft permits have been received and 35 applications are pending.

In some instances, the Army has found it more advantageous to join regional or municipal sewage treatment systems rather than to construct new plants or to improve existing ones. By the end of the year, it had concluded twenty-five such agreements and completed connections to thirteen systems.

The disposal of treated effluent on land has been used in the past primarily to conserve water at some installations. With the imposition of more stringent effluent standards, the Army has found that the land disposal technique has become a feasible alternative to the more costly advanced waste treatment technologies, and it is considering land disposal at seven installations. At Fort Ord, California, spray irrigation is planned to meet discharge standards. Further research on the problem is under way at the Corps of Engineers Cold Regions Research and Engineering Laboratory, where the work is being coordinated with the Office of The Surgeon General to take possible health hazards into consideration.

Throughout the fiscal year, the amount of solid waste reprocessed or reclaimed by the Army has not been significant, chiefly because recovery and recycling operations have been solely voluntary. During the period, however, the Environmental Protection Agency developed guidelines to be published early next year that will make recycling and recovery mandatory for all federal agencies. The Army is preparing regulations to carry out the new policy and will place greater emphasis on this activity in the upcoming year.

In the past most of the solid waste generated at Army installations has been placed in sanitary landfills. To find out whether the Army was complying with federal standards for handling such materials, the Environmental Protection Agency conducted a survey of the installations. Posts that do not conform to standards will be required to take corrective action.

Since some Army actions have produced controversy and the threat of court litigation over possible violations of the National Environmental Policy Act, the Army took steps to develop better management of the activities covered by the legislation. It issued regulations and reports to supplement the existing management systems at major commands and installations. This new guidance deals with water resources, air pollution abatement, hazardous and toxic materials, noise abatement, historic preservation, and spills of oil and other hazardous substances and with instructions on preparing the required Environmental Protection Control Report. Other regulations in preparation will furnish specific directions for submitting environmental impact assessments and statements and more guidance on overall environmental program management.

The Army has come under attack in the federal courts because it has not submitted environmental impact statements in connection with certain military activities that were allegedly required. At least five realignment actions were under litigation during the report period. As a result, the Secretary of the Army and the Chief of Staff have expressed the need for principal commanders to place more emphasis upon environmental protection. The Chief of Staff instructed all concerned to improve their performance and to comply with the spirit as well as the letter of the law.

During the report year, two environmental education courses have been offered at the Army Logistics Management Center at Fort Lee, Virginia. A one-week course for executives covered ecology, environmental impact statements, and adapting the responsibilities of military commanders and civilian managers to legislative requirements. Although the course was given ten times and 246 participants graduated, five classes had to be canceled because of fund shortages. The second course, lasting two weeks, covered the National Environmental Policy Act of 1969. Ecology and pollution, conservation and recycling of resources, and environmental impact assessments and statements were the major topics. The course was given five times and 146 participants graduated, but again five classes had to be canceled, this time because of a lack of students. One of the biggest problems in carrying out the program was the difficulty in getting military commanders, civilian managers, and staff members at the decision making level to attend the courses.

To alleviate this problem, the Agency sponsored briefings on command responsibilities in enforcing the provisions of the act. These were given at the Army Materiel Development and Readiness Command, the Army Forces Command, and the Health Services Command installations to over 2,100 people by representatives from Fort Lee. Training and Doctrine Command personnel gave similiar briefings to over 1,100 people at twenty-three facilities. A new one-week course on recycling and recovery will be offered at Fort Lee during the coming year.

As an incentive to installation commanders, the Environmental Quality Award is presented each year by the Secretary of the Army to the installation that has done the most to protect the environment. In 1976 Fort Carson, Colorado, won the 1975 award for integrating environmental considerations into planning and decision making; presenting newcomers to the post with ecology handbooks; developing solid waste, land management, pesticide, and wildlife management programs; and educating its people on environmental matters. Fort Carson also became the Army's candidate for the Secretary of Defense's Environmental Quality Award.

Research during the period to support Army compliance with environmental standards cost $10 million, and an initial five-year plan for research on environmental quality was prepared. A primary objective of the plan is to develop cost effective methods to abate pollution from munitions plants; this will involve toxicological studies to establish standards for environmentally safe levels of munition waste material and methods to monitor and control these pollutants. The Army submitted interim standards for five pollutants to the Environmental Protection Agency and made progress in developing methods for monitoring and abating pollutants. Also, research on the use of computers to assist in preparing environmental impact assessments received high priority in the search for closer conformity to the Army's obligations under the law.

Army Energy Programs

The Army's energy conservation goal for the first twelve months of fiscal year 1976 was to keep consumption below the 270.9 trillion British Thermal Units (BTU's) used the previous year. With intensive management the Army surpassed this objective by 5.4 percent, consuming only 256.4 trillion BTU's. Savings were made in all energy sources, except for aviation fuel and purchased electricity and steam, with installations using 84 percent and vehicles 16 percent. The savings are shown in the following table.

ARMY ENERGY CONSUMPTION

(In trillion BTU's)

Installation Operations	Fiscal Year 1975	Fiscal Year 1976	Percent Saved
Purchased electricity	84.5	84.9	(0.5)*
Natural gas	44.4	41.0	7.7
Liquefied petroleum gas	2.9	1.8	37.9
Coal	34.2	30.2	11.7
Purchased steam	0.6	0.7	(16.7)*
Petroleum heating fuels	58.9	56.5	4.1
Subtotal	225.5	215.1	4.6
Mobility Operations			
Aviation fuels	12.3	12.3	0
Motor gasoline	16.2	15.3	4.6
Diesel fuel	16.9	13.7	19.0
Subtotal	45.4	41.3	9.0
Total	270.9	256.4	5.4

* Indicates percent of increase in fiscal year 1976 consumption.

As part of the fuel conservation effort, the Corps of Engineers is carrying out seven programs involving solar heating and cooling. Some are being solely managed by the Corps of Engineers; others are being conducted in conjunction with the Energy Research and Development Agency, the Department of Housing and Urban Development, and the National Aeronautics and Space Administration. One of the seven is the installation of solar heating and cooling systems for Army Reserve centers at Greenwood, Mississippi, Albuquerque, New Mexico, and Seagoville, Texas. Another is experimental and includes seventeen Army housing units on seven posts using solar heating systems provided by the Energy Research and Development Agency and the Department of Housing and Urban Development. At Forts Bragg, Hood, and Riley, concept design has been approved for incorporating solar preheaters in barracks. These units, if successful, will reduce other energy requirements by preheating domestic water.

To review solar and other energy programs and policies, the Army established an Army Advisory Group on Energy in December 1975. The group, composed primarily of Army staff representatives, met frequently to exchange energy and conservation ideas and to develop courses of action on urgent energy matters.

The Army Energy Office, which is under the Deputy Chief of Staff for Logistics, provides staff assistance to him and to the Deputy Under Secretary of the Army, both of whom are members of the Defense Energy Policy Council. During the past fifteen months, the council conducted extensive deliberations over the proper role of the Department of Defense in the National Energy Program and the effects that international energy shortages may have upon national security.

With the establishment of the Military Standard Logistics Data System for Petroleum committee at the Defense level in October 1975, the Army Energy Office acquired another function. It provides a representa-

tive to this group, which is working to set up standard procedures for petroleum management and develop a standard petroleum data system.

In August 1975 the Army requested clarification from the Department of Defense of the responsibilities of each service for operation and maintenance of bulk petroleum distribution systems. Specifically, the request sought to end the present system of assigning responsibility for the distribution of petroleum products to the service that is the principal user of each type and to give worldwide distribution of all petroleum products to the Army. After a thorough study of the matter, Defense agreed in general with the Army's position. As a result, a draft DOD directive was issued in April 1976, which gave the Army responsibility for operating overland distribution systems and supporting land-based forces, with the Navy operating ocean terminal petroleum facilities that support the fleets and land-based forces where such support is by overwater transportation. The directive also supported the Army's contention that the principal user concept should not determine the assignment of distribution missions.

Army Litigation

The Army won a significant victory in the U.S. Supreme Court in *Greer* v. *Spock,* when the Court held that installation commanders may prohibit all political activities on their installations, including those areas generally open to the public, and may also forbid the on-post distribution of literature that is inimical to loyalty, discipline, or morale. In another matter of interest to the Army, the Court denied former 1st Lt. William L. Calley's petition for certiorari. The effect is to let the decision of the Fifth Circuit stand, which had held that Calley's claims of constitutional defects had been given full and fair consideration in the Army judicial system, that he had received a fair trial at his court-martial, and that no reason existed to interfere with the military judicial process.

Beginning with *Maxfield* v. *Callaway,* filed in April 1975, and continuing into fiscal year 1976, twenty-one separate suits challenged 1974 and 1975 Army promotion boards established for the ranks of CW–3, CW–4, major, and lieutenant colonel. All of the cases, however, were either dismissed without prejudice or stayed pending exhaustion of administrative remedies available in the Army Board for the Correction of Military Records (ABCMR). This board conducted a formal hearing and found that the promotion boards did not contain their required complement of reserve officers. The Secretary of the Army then ordered ten new boards convened, with appropriate reserve officer membership, to consider the reconstructed records of reserve officers in the primary zone. All but two of the new boards completed their work by the end of the fiscal year, and the last two should be finished in October 1976. While the boards were studying the records, however, officers seeking restora-

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tion to active duty filed seven new cases alleging that administrative remedies had been exhausted when the Army Board for the Correction of Military Records presented its findings and recommendations to the Secretary of the Army. All but two of these cases have been dismissed; the remaining suits are presently under consideration by federal courts in the District of Columbia and Connecticut.

The military system of review boards also faced significant challenges during the fiscal year. In *Urban Law Institute of Antioch College, et al.* v. *Secretary of Defense, et al.*, fifty individuals and organizations brought suit against the Secretary of Defense, the service secretaries, the boards for the correction of records, and the discharge review boards. The plaintiffs seek full disclosure of final decisions, reasons therefor, facts relied on, minority or dissenting opinions, voting records of board members, and current indexes of such decisions since January 1974, the effective date of the Freedom of Information Act. The plaintiffs contend that current board procedures violate due process and fundamental fairness. In a related suit against the Army Board for the Correction of Military Records, a class action was brought forward challenging the ABCMR procedure whereby staff personnel ruled on applications for reconsideration without referring the applications to the board (*Heiler* v. *Williams, et al.*). The plaintiffs seek a court order directing the board to review all requests for reconsideration and to provide a hearing for each applicant. The plaintiffs also want the board to review past requests for reconsideration that were improperly denied by staff personnel and to notify interested individuals of the opportunity to obtain a hearing. Settlement negotiations are almost completed, and it appears that the case will be settled early in fiscal year 1977.

In April 1976, the first allegations of extensive violations of the Cadet Honor Code at the U.S. Military Academy emerged. The Cadet Honor Committee investigated charges that over one hundred members of the class of 1977 had cheated on an electrical engineering take-home examination. On 1 June 1976, a class action suit was filed by Cadet Timothy Ringgold (*Ringgold* v. *U.S., et al.*) seeking to enjoin the officer boards and to reinstate cadets who had resigned. The court granted the government's motion for summary judgment, holding that the Cadet Honor Code was not unconstitutionally vague or discriminatorily enforced and that the single penalty of expulsion did not infringe the Eighth Amendment proscription against cruel and unusual punishment. On 30 June 1976, Cadet Kenneth Harms, who had been found not guilty by the Cadet Honor Committee, filed a suit (*Harms* v. *U.S., et al.*) protesting the referral of his case to a board of officers, which recommended separation. He also claimed the right to be tried by court-martial. The court

held that a Cadet Honor Committee proceeding is of no legal consequence, and, since separation from the Military Academy is administrative and nonpenal in nature, Harms is not entitled to criminal justice protections. On 30 July 1976 Cadet Paul Williamson brought suit (*Williamson* v. *U.S., et al.*) alleging that the Secretary of the Army unlawfully supplanted the Cadet Honor Committee with a different system (internal review panels) and contesting the finding of collaborating on the take-home examination on the basis that the alleged co-collaborator had been found not guilty. The court dismissed the case without prejudice for lack of exhaustion of administrative remedies.

The cadets then took their cause to the United States Court of Military Appeals in petitions for extraordinary relief. The court directed the briefing of certain issues to which the Judge Advocate General responded by filing a motion to dismiss, arguing that the court's jurisdiction is limited to criminal justice matters only. Oral arguments were held on 16 August 1976, and in September the court issued a brief order denying without prejudice the petitions to refile after exhaustion of administrative remedies.

Meanwhile, on 3 September 1976, a fourth lawsuit was filed in the Southern District of New York by Cadet D'Arcangelo (*D'Arcangelo* v. *Berry and Hoffman*) challenging the legal authority of the Secretary of the Army to promulgate Military Academy Regulation 1–6, which provided for the reapplication of separated cadets and waiver of service commitments. The court denied the plaintiff's requests for preliminary relief. This and other litigation arising out of the Military Academy cases remained active through the end of the fiscal year and will probably continue for some time to come.

In *Berlin Democratic Club* v. *Rumsfeld,* a federal district court held that allegations by U.S. citizens overseas that Army officials illegally wiretapped, opened mail, infiltrated organizations, and committed other acts of harassment and intimidation were justiciable claims. The court also held that a judicial warrant was required for U.S. wiretaps on citizens overseas, that damages could be recovered for violation of First and Sixth Amendment rights, and that a nonresident alien lacked standing to sue in a federal court for actions overseas against him by U.S. officials in violation of the Constitution. The judge also denied the Army's motions for dismissal or summary judgment, and in answering the complaint the Secretary of the Army had to assert a formal claim of privilege to protect certain military and state secrets. In May 1976, because of a potential conflict of interests, the Department of Justice authorized the U.S. attorney to withdraw representation of the six individually sued Army defendants, who then retained private counsel at government expense.

In another intelligence case, *Socialist Workers Party* v. *Attorney General,* court orders required a worldwide search of Army documents. The Secretary of the Army in turn asserted a military and state secrets privilege to protect documents affecting U.S. relationships with foreign governments.

Celebration of the Bicentennial

After the celebration of the Army's two hundredth birthday on 14 June 1975, the primary emphasis of the Army Bicentennial program was the support of activities in the civilian domain. Ninety-nine active duty installations and organizations engaged in 645 projects. These projects fell into eight general categories: ceremonies and pageants, 180; demonstrations and drill teams, 170; displays and exhibits, 150; publications and films, 60; speakers programs, 5; promotional activities, 10; community action, 50; and other undertakings, 20. Virtually all Army installations within the United States and many overseas as well as many National Guard and Army Reserve units conducted or supported Bicentennial activities during the celebration. Reports reveal that Bicentennial funds supported over 7,300 events before audiences totaling more than 99 million people.

A number of the projects were extremely well received. The Forces Command pageant, "200 Years of Readiness," received considerable praise and a Freedom Foundation Award. The outfitting of sixty-five Reserve Command color guards by the Office of the Chief of Army Reserve was another highlight of the Army's Bicentennial program.

The Army also helped form the 120-member U.S. Armed Forces Bicentennial Band. At the close of the fiscal year, the band neared completion of the sixth of seven major tours and had performed before nearly one million people. Included among the assemblage's work this year were a 35-day tour in the south and lower southwest, a 44-day swing through the midwest, and a 45-day tour through a northern tier of states. The band also participated in the Independence Day celebrations at Gettysburg, Philadelphia, and Valley Forge. Before the band's mission is completed, it will have given over 370 performances in more than 270 cities to an estimated 1.6 million people.

The major emphasis of the Army program outside the United States was to bring the nation's Bicentennial to Army people who could not be in the United States during the year. In Europe, virtually every Army community, installation, and activity conducted a variety of Bicentennial events ranging from open houses to parades and reenactments of historical events. In the Federal Republic of Germany, commands provided bands and color guards for Bicentennial events conducted by the host country, which spent some $10 million on the celebration of the United States' two

hundredth birthday. In Italy, a group of Army personnel went the length of the country to bring the story of the Bicentennial to the Italian people. In Japan, where a large-scale program was conducted, two major projects gained considerable media coverage. The first was a hike across the islands of Japan by two soldiers taking the message of the Bicentennial celebration to the Japanese people. Later in the year, United States Army, Japan, with the assistance of Fort Riley, Kansas, shipped two bison from Fort Riley to Japan for presentation to the Japanese people on behalf of the American community as a reminder of the Bicentennial; the two bison are now on exhibit in the Fukuoka City Zoo. In Korea, the Army conducted primarily festive and commemorative events on military installations. All told, the events conducted by the Army overseas were a major extension of the celebration of the nation's Bicentennial.

Promotion of Rifle Practice

The National Board for the Promotion of Rifle Practice (NBPRP) was established by Congress in 1903. Marksmanship training and certain marksmanship competition programs are carried out for the board by the Office of the Director of Civilian Marksmanship. Appropriated funds for NBPRP programs amounted to $230,000 in fiscal year 1976.

With equipment and materials provided by the Secretary of the Army, the Director of Civilian Marksmanship furnished .22-caliber ammunition and targets and loaned .22-caliber rifles to 2,200 civilian rifle clubs and their 130,000 members, of whom about 70,000 were from twelve to nineteen years old. Over 19,000 medals were awarded to junior members who achieved qualifying scores over approved courses of fire. Additionally, some 5,500 undergraduate members of eighty-three college clubs took part in rifle marksmanship training during fiscal year 1976.

The Director of Civilian Marksmanship also furnished medals to the top 10 percent of teams firing in the National ROTC Interscholastic-Intercollegiate Smallbore Rifle Match, in which 118 teams of ten members each participated, representing high schools and colleges throughout the United States.

The National Board for the Promotion of Rifle Practice again authorized the National Rifle Association to include four National Trophy matches in the program of the 1976 National Rifle and Pistol Championship Matches held at Camp Perry, Ohio, during August 1976. A total of eighty-five teams, including thirty-one civilian teams and 1,503 individuals, participated in the National Trophy Service Rifle and Service Pistol events.

XII. Summary

In retrospect, the record of the past fifteen months reflects the endemic problems facing an army in peacetime. With the threat of war on the wane and the costs of maintaining armed forces swiftly mounting, economic factors tended to play a greater role in determining the rate of change and the general status of the Army. During periods of postwar retrenchment there are fewer changes, and the military establishment generally receives less public attention. This fiscal year was no exception to the rule.

General Weyand, the Chief of Staff, summarized the positive and negative aspects of the period just before his retirement at the end of the fiscal year. Although he believed that the Army had attained operational readiness standards higher than ever before in peacetime, he pointed out that deficiencies still remained. The shortages in combat support units, such as artillery battalions and armed helicopter companies, for example, would make it difficult to sustain this initial readiness.

In his characterization of the officer and enlisted ranks, General Weyand had high praise for their high sense of professionalism. He pointed out, however, that the Army was having a difficult time in recruiting and retaining qualified and motivated people, especially for the reserves. One effect of this failure was a serious shortage of noncommissioned officers in the middle grades; another was a steadily decreasing number of ready replacements in the event of crisis. Basic to the problem was a lack of resources to provide sufficient economic incentives for the young soldiers to remain on active duty or for civilians to join the reserves.

In the Chief of Staff's opinion, the situation in arms and equipment was also mixed. Congress had recognized the need to accelerate the production of some major items, and the equipment posture in the reserve components had also gradually improved. On the other hand, significant shortages of important equipment would be likely for some years to come.

In balancing off the gains and losses of the year, the Chief of Staff was saying, in effect, that the Army was doing the best it could under the circumstances. Given the constraints imposed by budget limitations and continuing inflation, it was trying to use its resources wisely to attain the highest possible combat readiness, to organize its management, command, and force structure efficiently, and to develop and procure the best equipment and weapons for its troops as rapidly as possible. The potent

obstacles to reaching these goals were the lack of an immediate threat to peace, the need to rely upon volunteers, the prevailing economic conditions, and the high costs of raising, equipping, and maintaining an effective army—and there appears to be little prospect of radical change in these factors in the offing. In this interim phase, barring unforeseen developments, the Army will continue to carry out its 200-year-old role of holding the fort.

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