Department of the Army Historical Summary

Fiscal Year 1983

CENTER OF MILITARY HISTORY
UNITED STATES ARMY
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Introduction

At the end of fiscal year (FY) 1982, the Army was in the midst of the most comprehensive modernization since World War II, one whose volume, diversity, and technological complexity were unlike any that had gone before. During FY 83, the focus of the modernization effort would be on quality, and its aim would be the building of an Army of Excellence. "It is quality that fosters respect and restraint on the part of potential foes," said Army Chief of Staff General Edward C. Meyer in October 1982. "It is quality that nourishes a favorable kinship with allies. It is quality that helps to maintain a supportive attitude in the public eye. And it is the recognition of quality that stirs soldiers to a healthy self-image of themselves, their units and the Army." Indeed the quest for quality was to be thematic throughout the new fiscal year as the Army prepared for the many diverse tasks it might be called upon to accomplish.

During the decade following the Vietnam War, noted General Meyer, the Army lacked three necessary ingredients for the attainment of quality: a sense of direction, willing and able participants, and assets sufficient to the intended task. U.S. military forces essentially remained static in strength and size. By late 1982, however, most of this was changing for the better. The Army began to modernize, spurred on by military competition from the Soviet Union, which had been upgrading its conventional and nuclear armed forces during the decade as the United States allowed its to languish. "The most serious threat facing the U.S. Army," said Secretary of the Army John O. Marsh, Jr., in October 1982, "is a major conventional war with the Soviets, especially considering the huge imbalance in numbers of weapons systems and fighting forces." During FY 83, the U.S. Army was determined to restore the military balance with the Soviet Union.

To help restore the balance of military power in Europe, the Army planned to deploy 572 U.S. Pershing and Cruise missiles in five NATO (North Atlantic Treaty Organization) countries beginning in December 1982. These events were sure to receive the most attention during the nuclear arms negotiations scheduled to convene in Geneva in 1983. Also, President Ronald Reagan's Commission on Strategic Forces, headed by Brent Scowcroft, a

former national security adviser to President Gerald Ford, while endorsing the MX missile, proposed "building down" the opposing strategic nuclear forces. Other balance-restoring plans were to be set in motion.

Meanwhile, violence and terrorism escalated on the international scene in the autumn of 1982, causing power imbalances to take on new relevance. In the Middle East, Lebanon's president was assassinated, and massacres in two Palestinian refugee camps left 300 dead. Both events placed in jeopardy an international peace-keeping force, including a contingent of U.S. marines sent to Lebanon in September 1982. In West Germany, the Revolutionary Cells terrorist group took credit for the bombing of two U.S. military bases, while in Asia Minor there was the possibility that war between Iran, which was torn by controversy, and Iraq would escalate.

The worsening international situation at the beginning of FY 83 increased the U.S. Army's need to deal with its weaknesses. According to Secretary Marsh these included a lack of adequate air and sealift for overseas deployment and reinforcement, shortages of weapons and equipment, and frustratingly slow progress in the modernization of equipment. During the new fiscal year the Army planned to move aggressively to shore up these weaknesses and maximize its strengths. It intended to integrate new equipment and organizations as well as doctrine so that its soldiers would have the confidence that leads to victory in combat. For example, the Army planned to move forward with the emerging Air-Land Battle doctrine, which stresses extreme mobility, independent action, and deep strength against enemy follow-on echelons. The new weapons and equipment to complement the doctrine would receive a high priority in Army research and development during FY 83. Also, the Army's quest for quality would extend to six major areas, each absolutely essential to the maintenance of an effective land force: manning, training, modernizing, deploying, and sustaining. What follows are some of the more important aspects of these areas.

Manning. The Army committed itself to recruiting and retaining highly qualified and dedicated soldiers. It expected to surpass its 1982 accomplishment of having recruited 80 percent high school graduates. The Army also planned to continue its significant initiatives in the area of unit stability and cohesion, such as project COHORT (Cohesion, Operational Readiness, and Training). Soldiers in COHORT companies are trained as a unit and stay together as a unit throughout their first assignment. They are also allowed and encouraged to return to the unit of their initial assignment throughout their careers. The Army planned to adopt the new manning system based on units in

about 10 percent of its companies. A larger percentage would overburden the divisions, which were then engaged in two major modernization activities: conversion to Division 86 configuration in 1984 and the continuous infusion of new materiel. The Army also planned to redress deficiencies in the Individual Ready Reserve (IRR) and aviator strength during FY 83 and to retain high-grade, skilled civilians who were needed to provide technical competence, advanced managerial skills, and institutional continuity to the Total Army.

Training. The Army intended to accelerate initiatives begun in FY 82 to improve the training effectiveness of the Total Army. It planned to introduce new equipment, reorganize units, provide realistic, mission-oriented training, modernize training facilities, construct ranges to accommodate new weapons, improve training management, and develop new training and simulation devices, which would allow the Army to train more effectively, especially with regard to costs. The Army also intended to send twenty battalions to the National Training Center (NTC) at Fort Irwin, California, in FY 83 for realistic and challenging unit combat training. National Guard and U.S. Army Reserve (USAR) support units would participate in NTC training exercises as well. "With proper training," Secretary Marsh said, "we can see the culmination of leadership, managership and the ability to use modernization to the best advantage: a soldier-unit-Army prepared and eager to win."

Modernizing. The Army's modernization effort was to focus to a great extent on designing, developing, and procuring modern arms and equipment for the Total Army. The National Guard and reserve forces, whose equipment was old, obsolete, or incompatible with equipment in the Active Army, were included in the modernization scheme. Equipping the Total Army required modernization efforts in three areas: first, in organizations that use or maintain the new equipment; second, in the equipment itself; and third, in the facilities that support the organizations and equipment.

To provide units dedicated to rapid deployment missions, Special Operations Forces (SOF), and other forces capable of dealing with the broad spectrum of threats to U.S. interests, in FY 83 the Army intended to add to the Active Component (AC) 2 military intelligence group headquarters, 2 military intelligence battalions, 1 air defense artillery battalion, and 10 company-size units, and to modernize 16 battalions as a result of major weapons systems changes. The Army planned to make many organizational changes based on the Army 86 Modernization Plan. Some battalions in armored and mechanized infantry divisions would transition to Division 86 designs during FY 83 using personnel

and equipment assigned to the divisions at the time of transition. The Army intended to move forward with its High Technology Test Bed (HTTB) project involving the 9th Infantry Division at Fort Lewis, Washington, which would help the Army develop a lean, hard-hitting force—a new high technology light division.

The Army planned to modernize its equipment so that it outperformed Soviet equipment and thereby to compensate, to the extent possible, for the Soviet numerical advantage. The Army's research and development effort of the last decade had matured, and it was then procuring equipment that could restore much of the qualitative edge. The FY 83 procurement budget would give the Army another needed increase. Some of the items to be fielded were the M1 Abrams tank; the Bradley Fighting Vehicle System (BFVS); the M9 armored combat earthmover, the Apache attack helicopter; the Viper—a portable close-in antiarmor weapon; the new TOW-2 (tube launched, optically tracked, wire guided) missiles and modification kits; the Patriot and Pershing II (PII) missile systems; and the Black Hawk helicopter.

Since many of the Army's facilities were built before or during the 1940s, many major components have failed, and extensive repair replacement has been required. Funding, however, has not yet kept pace with the needs. Nevertheless, in FY 83 the Army programmed a modest sum to restore its physical plant worldwide.

Mobilizing, Deploying, and Sustaining. At the beginning of FY 83, Secretary Marsh stated that "The history of warfare has shown us that the power that can first mobilize its forces, first bring those forces effectively to bear, and then fully sustain them, stands the best chance of winning. Conventional war today and in the forseeable future is no different so far as the outcome is concerned." The Army planned to redress the shortages in equipment and training facilities for mobilization. The FY 83 budget included money to develop standard designs for the needed facilities and for site adaptation of these plans. Such advance planning would help to reduce mobilization construction response time by approximately 90 days.

As noted above, at the beginning of FY 83 there was a lack of adequate sealift and airlift for overseas deployment and reinforcement. Correcting these deficiencies would be a major Army concern in FY 83. Closely allied with deploying an Army is the ability to sustain it. "Considering the condition of our war reserve stocks, the unfortunate equipment situation of our reserves, and the uncertainty of host-nation support in time of conflict," Secretary Marsh added, "we must vigorously analyze such sustainment problems and then recommend solutions to resolve them." In FY 83, the Army planned to increase its war reserve stocks, continue

improving the area of host-nation support (HNS), provide more air-cushioned landing vehicles, and continue standardizing and streamlining automated logistics systems that support supply, maintenance, transportation, and ammunition functions during wartime.

At the beginning of FY 83 the perfection the Army sought was still distant, but the Army was in an exciting time of transition. As General Meyer stated in October 1982, "Our direction is clear, our people good, and long term programs for correcting deficiencies set in place." The Army was headed "toward a quality Army—well trained, disciplined and combat-ready." General Meyer concluded that quality materiel in the hands of quality units was a reality, "and in the years ahead, as production swings into gear, this fact will be increasingly evident to all elements of the Total Army."

The account that follows reports how the Army met the challenges implicit in General Meyer's statement during FY 83.

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Operational Forces

Advancing the capability of the Army to go to war by improving the quality of its operational forces guided Army planning again during FY 83. Such a guidepost, according to Secretary Marsh, was dictated by the fact that nearly one-quarter of the world's nations were involved in war or insurgency. The Army's operational forces had to be in a high state of readiness if they were to respond to crises globally. The Army planned to achieve readiness by seeking qualitative advantages instead of matching its strongest potential adversary, the Soviet Union, system for system.

In FY 83 the Army deployed its total operational forces, consisting of 24 divisions (13 heavy and 11 light) principally in the Continental United States (CONUS), U.S. Army, Europe (USAREUR), Hawaii (WESTCOM [Western Command]), and Korea, with smaller elements distributed around the world on peace-keeping, advisory, and logistical missions. CONUS had 10 active divisions and all 8 reserve divisions; USAREUR had 4 divisions and 4 forward-stationed brigades of CONUS divisions; Hawaii and Korea each had 1 division.

Organizational Developments

The Army 86 Modernization Plan played a pivotal role in determining unit activations, inactivations, reorganizations, and conversions during FY 83. The goal of these organizational changes was to tailor the Army's combat and support forces to the optimum structure required to take full advantage of qualitative superiority designed for implementing a "fight to win" strategy.

In the Continental United States, the Army activated 2 support battalions at Fort Hood, Texas, and inactivated 2 mechanized infantry battalions—1 in the 1st Cavalry Division and the other in the 2d Armored Division. Consistent with its plan to phaseout the Nike Hercules air-defense system and replace it with the more advanced Patriot, the Army inactivated the last CONUS-based Nike Hercules battery at Fort Bliss, Texas, and two Nike Hercules batteries in USAREUR and activated a

Patriot air defense battalion at Fort Bliss. The Army also converted the 3d Battalion 6th Field Artillery in CONUS and the 3d Battalion 16th Field Artillery in USAREUR, to handle the multiple launch rocket system (MLRS).

In WESTCOM the Army inactivated the 372d Army Security Company and the 25th Military Intelligence Company and used their resources to organize the 125th Military Intelligence Battalion. Similarly, the Army used assets of the inactivated 340th Army Security Company to form the 511th Military Intelligence Company, which provides intelligence support to the 11th Armored Cavalry Regiment. This activation followed the Army's plan to improve its combat electronic warfare and intelligence capability begun in FY 80.

A number of force structure changes took place in Europe during the year, particularly in the areas of combat service support and combat support. Activation of the 12th Medical Evacuation Hospital became a significant milestone in the Army's program to increase combat zone beds and overall readiness. Activation of the 179th and 196th Test Station and Equipment Repair Facilities Teams provided increased general maintenance support to handle the large quantities of modernized equipment entering USAREUR. The Army activated the 16th and 76th Nuclear, Biological, and Chemical (NBC) Detachments to provide an NBC warning and reporting center for VII Corps and the Berlin Brigade. The Army activated five trailer transfer detachments (15th, 152d, 260th, 270th, and 517th) to modernize line haul operations, including refueling, temporary storage, and transfer of supplies. Activation of the 515th Medium Truck Company provided additional petroleum transportation and distribution capability. Transition from peacetime to wartime operations was facilitated by the activation of two headquarters and Headquarters Company area support groups. The Army converted seven ammunition companies to direct or general support ammunition companies in accordance with its Munition Systems Support Structure (MS 3) concept. Also it modernized thirteen maintenance companies so that all maintenance companies in USAREUR now have the same base Standard Requirements Code (SRC) structure and are supported with augmentation maintenance teams based upon assigned missions.

A major development occurred in the unified command structure during FY 83. On 1 January 1983, the Army officially activated the U.S. Central Command (USCENTCOM) as a unified command with a focus on Southwest Asia. USCENTCOM evolved from the Rapid Deployment Joint Task Force, established in 1980, for contingencies outside the NATO area and Korea.

USCENTCOM headquarters, established at MacDill Air Force Base near Tampa, Florida, has the mission to plan, jointly train, exercise, and be prepared to deter aggression if it should occur in its operational area—nineteen countries in Southwest Asia, the Persian Gulf, and the Red Sea.

Tactical forces are not assigned to the command, although Army, Navy, and Air Force elements, usually not committed to NATO or Korea, are available to USCENTCOM for planning, exercises, and operations as necessary. These forces include three and one-third Army divisions and various Ranger and Special Forces units with appropriate combat support and combat service support, tactical fighter units, an airborne warning and control wing, reconnaissance and electronic combat groups, a special operations wing, carrier battle groups, surface action and amphibious ready groups, maritime patrol squadrons, a forward-deployed Naval Middle East Force (MIDEASTFOR), a Marine Amphibious Force (MAF), and a Marine Amphibious Force Brigade (MAB). Additionally, seventeen ships have been positioned in the Indian Ocean near Diego Garcia as a Near Term Preposition Force (NTPF). These ships carry equipment and supplies to support USCENTCOM forces in the event of a contingency.

Readiness

"To achieve the readiness needed to counter the broad range of threats against which our Army must be prepared," noted Secretary Marsh and General Meyer, in a joint posture statement before the 97th Congress, "we need individuals throughout the Total Army who are exceptionally fit, both physically and mentally, and units throughout the Total Army that are extensively trained, properly structured, adequately equipped, tactically mobile, strategically deployable, and extremely flexible." During FY 83, the Army continued to improve its overall readiness posture, with advancements in personnel readiness, training status, and equipment modernization.

Although the number of Active Army units achieving authorized levels remained at 71 percent, personnel readiness progressed in many areas. In recruiting quality people, the Army achieved 100 percent of its objective, with 87.6 percent of new recruits having a high school diploma and 61.4 percent scoring above average on the Armed Forces Qualification Test (AFQT). Reenlistments for FY 83 fell short of their objective, but continued improvement occurred in achieving the number of

noncommissioned officers authorized and in the skills needed. Noncommissioned officer shortages fell from 7,700 in FY 82 to 2,300 in this fiscal year. In another favorable personnel trend, only nine battalions reported not combat ready, while ninety-seven battalions reported combat ready or combat ready with minimum personnel deficiencies by the end of FY 83.

Reserve components (RC) also made progress in personnel readiness as a result of better recruiting and full-time manning initiatives. The number reporting a not-combat-ready status continued to decline.

The maintenance of a relatively high training status again this year also contributed to combat readiness. The better quality of recruits plus extended and improved basic training programs, which included increased use of devices and simulators, have advanced soldier capability upon first assignments to units. Additionally, deployment exercises and the NTC have improved individual and collective skills.

Equipment modernization contributed to overall combat readiness as well. The MLRS, the newest and most modern field artillery system, which made its debut in the Army in March 1983, provides the capability of striking with great accuracy and massive firepower at ranges beyond cannon artillery. Also the Army's first Patriot battalion—the unit equipped with the new, all-weather, surface-to-air missile system designed to attack and destroy several enemy aircraft simultaneously—became operational in the second quarter of FY 83. The Black Hawk helicopter, the most advanced utility helicopter in the world, represented another great stride in Army aviation.

Although the introduction of modernized equipment initially produces equipment shortages, which adversely affect the standards by which a unit's readiness is measured, once completely fielded, updated equipment significantly improves a unit's ability to fight wars. For example, the M60A3 tank provided a night-fighting competence not inherent in the M60A1 tank; the M1 Abrams tank, and its companion vehicles, the Infantry Fighting Vehicle (IFV) and Cavalry Fighting Vehicle (CFV), which make up the Bradley Fighting Vehicle System (BFVS), furnished our combined-arms team the most powerful, mobile, and survivable combat vehicle systems possible. The BFVS adds a new dimension to combat efficiency among mechanized infantry and cavalry units.

Given all of the force modernization efforts mentioned above, our Army is increasingly ready and capable of meeting its commitments around the world. Considering the Soviet appetite for military competition, however, the Army's current modernization effort must continue.

The Army Overseas

By continuing to make substantial progress in the Army-wide modernization program, USAREUR maintains a war-fighting capability that keeps pace with the Soviet military buildup. Combat readiness is accomplished through changes in organization, modernization of equipment, and improved and expanded training.

This fiscal year each division became a more effective fighting element by receiving an air attack brigade (cavalry brigade air attack), a combat service support element to each brigade (forward-support battalion), and a MLRS battery to each division artillery. As a result, the division has more combat power, better support, and fewer command and control deficiencies. In addition, the division is better able to carry out the Air-Land Battle doctrine of deep strikes in the enemy's rear, severing lead echelons from the rest of the formation and disrupting, delaying, and destroying follow-on forces.

In order to accommodate the Air-Land Battle doctrine, the Army will add more than 400 new items of equipment to the Seventh U.S. Army's inventory during the 1980s. The Seventh Army has already begun receiving the M1 Abrams tank, the Bradley fighting vehicle, the Patriot air-defense system, Black Hawk helicopters, and the MLRS and is well along in converting the M60 tank series. Since air transportation is limited, and since the U.S. Army will need rapid reinforcements sent to Europe should war come, the Seventh Army is storing heavier equipment items that the U.S.-based units will need in order to fight. This equipment is termed "pre-positioned materiel configured to units sets," simply called POMCUS. Reinforcement plans, however, include much more than POMCUS units. Large numbers of reinforcing units, along with reserve components, will move to Europe and train with the active force. CAPSTONE, a procedure aligning reserve component units scheduled for Europe with their wartime chain of command, and NATO counterpart contingency training are examples of programs that emphasize the Total Army concept. To offset air and sealift limitations from the United States in the event of hostilities, allied host nations will supply U.S. forces with much-needed logistical support, including medical help, such as hospital facilities.

To improve and expand training programs, USAREUR allocated a large portion of its billion dollar budget for FY 83 to training. The command is upgrading firing ranges to better accommodate the new weapons at a cost of another 70 million dollars and is conducting periodic large-scale maneuvers with NATO members.

As for U.S. Army readiness in Korea, at the end of FY 83, General Robert W. Sennswold, Commanding Officer, U.S. Forces, Korea, and Eighth U.S. Army (EUSA), stated his belief that "Eighth Army units have achieved and now maintain a readiness posture commensurate with their mission requirements." Since the end of the Korean War thirty years ago, those requirements have been, together with the forces of the Republic of Korea (ROK), to defend South Korea from North Korean aggression. Despite North Korea's unprecedented military buildup this year, Eighth Army continues to maintain that ability by modernizing doctrine and training, improving communications and tactical intelligence, and enhancing combat fire capability.

Modernizing doctrine and training involved adapting the Air-Land Battle principle to the situation and capabilities in Korea and then improving the U.S./ROK Combined Forces' ability to undertake the Air-Land Battle doctrine through participation in updated field training exercises. The best test of Air-Land Battle tactics this year occurred during the annual field training exercise, termed TEAM SPIRIT 83, which was conducted from early February to mid-April and involved some 190,000 Republic of Korea and U.S. forces. At the conclusion of the exercise, which challenged intelligence gathering, communications, and mobility, General Sennswold commented, "Team Spirit 83 was not only a great training success, but, more important, it also confirmed that we are on track in successful employment of Air-Land Battle doctrine."

Eighth Army is also achieving combat readiness by improving communications and tactical intelligence. The 501st Military Intelligence Group is currently receiving additional manpower and equipment to support its intelligence-gathering functions. A tactical satellite company will deploy to Korea, followed by an area signal battalion to join the 1st Signal Brigade in the near future.

Other force structure improvements that enhance readiness and efficiency include activating attack helicopter battalions to provide a highly mobile, aerial-delivered antitank capability, particularly valuable given the increasing North Korean armor threat; converting armor and mechanized infantry battalions to the Division 86 design and a multiple launch rocket system battery to the 2d Infantry Division's general support artillery battalion; and authorizing military manpower increases for combat support and combat service support forces, which will provide critically needed supervisory personnel.

Associated with Eighth Army's modernization drive are advances in logistical support. To improve fuel supplies, a comprehensive petroleum tank construction program is under way that

will substantially increase in-country storage capacity. Moreover, the Eighth Army is increasing facilities for the covered storage of supplies and equipment.

Eighth Army's ability to fight the land war progressed this year when the Army's first three COHORT units—a field artillery battalion and two infantry companies—were assigned to the 2d Infantry Division. Acquiring modernized equipment and intelligence forces has helped as well. The 2d Division already has fielded the M198 155-mm. towed howitzer, AH-1S Cobra TOW, and a military intelligence battalion. Over the next few years, Eighth Army will receive some 180 new equipment systems, including counter-fire radar, the MLRS, Viper, Black Hawk helicopter, improved TOW missiles, M60A3 tanks, and the Tactical Fire Direction System (TACFIRE).

The forces of the ROK also are improving both quantitatively and qualitatively. They have embarked on their second five-year force-improvement plan, a portion of which supports U.S. forces through combined-defense improvement projects (CDIP). The five-year plan is directed toward upgraded ROK armor and air defenses, continued aircraft coproduction and missile assembly, aircraft and radar purchases, continued construction of frigates and high-speed naval craft, as well as strengthened infantry and tank units. Although the plan will improve maneuver and firepower capabilities, it does not alter the current imbalance of ROK forces via-à-vis North Korea.

Moving eastward, this year WESTCOMs 25th Light Infantry Division, stationed on Oahu, Hawaii, improved its ability to carry out the Army's mission in the central Pacific. Besides undergoing intensive combat training on Oahu and at the Pohakuloa Training Area on the island of Hawaii, the divison conducted training exercises for both staff and tactical units of various strengths from platoon to division level in New Zealand, Australia, the Philippines, Japan, and Korea. The division also sent one battalion to the U.S. Marine Corps Amphibious Warfare School at Coronado, California, and conducted a Map Exercise (MAPEX) with I Corps at Fort Lewis, Washington.

The improved U.S. Army continued to play an important role in advancing hemispheric security during FY 83, although U.S. support for Great Britain during the Falkland Islands War between Argentina and the United Kingdom dampened the effects of the U.S. security assistance effort in the region. The Army helped to establish a Regional Military Training Center (RMTC) for Central America in Honduras, where a Salvadorian battalion trained and received equipment this year. The Army provided additional security assistance to El Salvador and also to Guatemala, Honduras, Bolivia, and Costa Rica, usually in the

form of helicopters, howitzers, small arms, ammunition, and individual clothing and equipment. In response to urgent requests, El Salvador also received critical security assistance airlifts.

Command and Control

An Army in transition needs to rethink and rework plans. During FY 83, work continued on the rewriting of the Army Command and Control Master Plan (AC 2MP) first published in 1978, in fifty-eight volumes, with several more volumes added in 1980. The plan not only contains a tactical portion, but also defines the architecture for the Army Command and Control System (ACCS), sets forth deficiencies to be overcome, and establishes responsibilities and milestones for implementing ACCS. The updated version, scheduled for publication in February 1984, focuses on baseline capabilities of the tactical echelons of the Army, which were projected from the current program year through 1990. The Army expects that the plan will facilitate the progression from requirements and doctrine to programming and budgeting priorities.

Also to improve command and control, this fiscal year the Army designed a Mobile Communications Center for corps and division levels that is flexible and able to survive enemy attack. The center also should reduce the number of unique signal unit tables of organization and equipment (TOEs) and thereby save on personnel and money for the Army.

Intelligence Activities

"The shrinking of the planet through technology—and the collapse of time and space—places a great premium on intelligence and the need for an effective intelligence-gathering capability," noted Secretary Marsh, at the 1983 Association of the United States Army (AUSA) meeting. This year the Army modernized its intelligence activities in such areas as personnel security, security investigation and counterintelligence, organizational changes, systems updating, program expansion, and Army regulation and plans revision.

In the area of personnel security, specialists participated in numerous studies on the use of the polygraph for personnel security screening and helped civilian contractors study the feasibility of including psychological screening as part of the personnel security investigation. Following the reinstatement of the Periodic Reinvestigations (PR) program, which had been suspended for twenty months, personnel security specialists processed 134 cases in which the Central Personnel Security Clearance Facility

(CCF) had made determinations to deny or revoke security clearances. The specialists also took actions to accelerate security clearances for new accessions, identify fraudulent enlistments at the earliest possible point, and support faster processing of new accessions in the event of a large-scale mobilization. On 1 August 1983, the Army revised Army Regulation (AR) 380–5 pertaining to the classification, downgrading, and declassification of information requiring protection in the interests of national security. The revision implemented an Executive Order and the supplementing Department of Defense (DOD) regulation.

On 22 February 1983, the Army established a Technology Transfer Division within the Counterintelligence Directorate of the Office of the Assistant Chief of Staff for Intelligence (OACSI). The new division's mission is to establish technology transfer policy for the U.S. Army and to monitor technology transfer issues of concern. This mission is accomplished through the active staff review of munitions and strategic trade cases, bilateral and multilateral codevelopment/coproduction agreements of Army-related military equipment, and proposed technology transfer policies generated by higher and adjacent echelons. Further, this division adjudicates all foreign requests for visits, military documents, and accreditations of exchange, liaison, and officers. Although at cadre strength, the division is now organized and functioning as a viable entity within the Army staff and is looking forward to increased responsibility.

In the spring of 1983 the Counterintelligence Directorate also received responsibility for operational intelligence oversight. The duties were assigned to a senior civilian and included review of intelligence activities to ensure conformity with national, Department of Defense, and Army policy; drafting of Army implementation of DOD policy; and coordination with the Office of the Judge Advocate General and Office of the General Counsel to establish proper legal review of concepts and proposals. The Army is revising AR 381–10, *U.S. Army Intelligence Activities,* to comply with this action.

During the year, OACSI's Counterintelligence and Security Division handled 685 actions relating to Army intelligence activities, the majority being Freedom of Information Act (FOIA) and Privacy Act actions and coordinations. This division also spent numerous hours this year in locating and coordinating material for the Justice Department's Office of Special Investigations (OSI) to use in its investigation of Klaus Barbie's relationship with Army intelligence. The investigation of Barbie, charged with war crimes dating from 1943 when he was a Gestapo official in Lyon, France, began when the government of France extradited him from Bolivia where he was living under an assumed name.

In the area of imagery and signals intelligence, the Army held a general officer review on two interim tactical intelligence exploitation systems, which are being developed under the Tactical Exploitation of National Capabilities (TENCAP) program. The two systems are the Enhanced Tactical Users Terminal (ETUT)—associated with the Electronic Processing and Dissemination System (EPOS)—and the Tactical Imagery Exploitation System (TACIES). In another TENCAP development, testing continued of the Collection Management Support System (CMSS) at VII Corps.

Another automated intelligence system, the Tactical Simulation program (TACSIM), consists of a series of computers and a remote communications terminal, which simulates the results of Army reconnaissance and surveillance systems as well as theater- and national-level intelligence collectors operating against a theater-size enemy force. The realistic intelligence training support provided by the TACSIM program received increased attention within a number of major Army commands and unified commands, and the U.S. Army Training and Doctrine Command's (TRADOC) Combined-Arms Test Activity at Fort Hood, Texas, which operates the program, was hard pressed to keep up with consumer demand. The Army was weighing proposals to expand the program as the fiscal year drew to a close.

In March 1983 OACSI served as the executive agent for a Joint Chiefs of Staff (JCS) special project, GRAINY HIDE, designed to assess the capabilities of national intelligence systems to support tactical intelligence requirements. Army units, which participated in the special project during exercises at Fort Bragg, North Carolina, received valuable training with both computer-simulated intelligence and the exploitation of intelligence data from national collectors.

In late 1983 the Army awarded a contract for the procurement of the CRAZY HORSE system. CRAZY HORSE is a jointly funded Army and National Security Agency (NSA) system designed to satisfy selected intelligence collection requirements at the echelon above corps for theaters throughout the world. The Army activated the unit to receive this system in late 1983 as a subordinate of the Intelligence and Security Command (INSCOM) at Fort Monmouth, New Jersey.

During the year the Signal Intelligence (SIGINT) Division of OASCI, in conjunction with NSA, initiated a Field Assistance Visitation (FAV) program modeled after the NSA visitation program for strategic cryptologic facilities. The FAV is intended to review cryptologic operations of tactical units in accordance with governing directives and to provide advice and assistance to field commanders aimed at improving such operations. Intelligence

officials visited Army tactical units in Europe in 1983 and will visit U.S. Army Forces Command (FORSCOM) and Eighth Army units in 1984.

The Army took a number of steps during FY 83 to raise the caliber and increase the productivity of DOD Human Intelligence (HUMINT) personnel. This year saw the successful completion of the Army-coordinated Department of Defense Human Intelligence Plan, developed by a Defense Intelligence Agency (DIA) study group, which projects thirteen years into the future and which will be revised annually. The purpose of the plan was to identify DOD HUMINT shortcomings, to recommend improvements, and to implement recommendations. The latter has already begun and will continue through 1984. In response to the continuing concern that service intelligence activities lack adequately trained HUMINT personnel, OASCI's HUMINT Division participated in the final coordination phase for the DOD Strategic Debriefing and Interrogation Course (DSDIC). The HUMINT Division also provided the keynote speaker at the first graduation on 9 September 1983. Finally, in conjunction with the Defense Attache's Office, Paris, the HUMINT Division participated in the preparation and coordination of an agreement on the exchange of information between the Assistant Chief for Intelligence, Department of the Army (DA), and his French G–2 counterpart.

The Army emphasized the Tactical Intelligence Readiness Training (REDTRAIN) program again this year. The REDTRAIN program provides increased training opportunities to tactical intelligence units and personnel of both the active and reserve components. By incorporating realism in the training environment and using actual intelligence materials wherever possible, and by enhancing individual technical and foreign language skills and unit readiness, this program provides satisfaction to the individual participants and thereby improves the Army's ability to retain them. The program also results in the production of intelligence useful to the Army's tactical forces and, occasionally, to the national intelligence community. This year the Army placed special emphasis on Reserve Component participation in the program, to include planning for the participation of members of the Individual Ready Reserve (IRR), that is, those intelligence specialists in the reserves who have no unit affiliation.

In FY 83 the REDTRAIN program provided a menu of courses, hands-on experience, and on-the-job-training opportunities embracing all intelligence disciplines. These include collection management; human, signal and imagery intelligence collection, and counterintelligence operations involving "real

world" targets; exercise and enhancement of foreign language skills in conjunction with collection operations, such as communications intercepts, debriefings and interrogations of immigrants from denied areas, and liaison with foreign intelligence agencies; analysis of raw and semiprocessed all-source data, focused on potentially hostile forces and areas of operations directly related to the contingency missions of the supported combat units; creation of intelligence data bases and production of combat intelligence; and exercise of unit operational processes leading to improved readiness.

This year the REDTRAIN program provided $7.8 million to pay for, among other items, the travel and per diem expenses of individuals participating in live environment training away from their units; the purchase of state-of-the-art, commercial training equipment and training aids; the establishment of a foreign language training center in Europe; the operation of two Reserve Component consolidated intelligence training facilities; the development of technical packages to support intelligence unit training; the development of exportable foreign language materials; and the upgrading of secure training facilities.

Those funds also assisted in the procurement of equipment for the FY 84 establishment of three TROJAN training facilities, in addition to the three already established in FY 82. TROJAN facilities bring live intercepted signals to signal intelligence specialists at or near their home stations for their analysis and incorporation of the resulting intelligence into all-source products.

In FY 83 over 3,000 Active and Reserve Component intelligence specialists participated in out-of-unit live environment training. Nearly all Active Component and numerous Reserve Component unit program personnel participated in focused in-unit training activities and intelligence production.

In 1983 language training in the Army took on added emphasis with the organization of the Special Operations Command (SOCOM) and continued development of the 1980 Vice Chief of Staff of the Army (VCSA) initiatives. Those initiatives included developing a language incentive pay proposal; rewriting Army regulations governing language training; and assigning to the 142d Military Intelligence Linguist Battalion, Utah Army National Guard, specialized intelligence functions which require the use of foreign languages.

This fiscal year the Army took initiatives to revitalize its Intelligence and Security Civilian Career program. The Army totally revised the regulation governing the civilian program; appointed a full-time coordinator and action officer for the program in April 1983; undertook a worldwide positions and classification management survey of GS–080 and GS–132 positions with results

to be published in February 1984; ensured active civilian participation in the DOD intelligence career development program; developed qualification and classification standards for intelligence research and operations specialists, which will be completed in 1984; and reviewed case officer and scientific and technical high-grade requirements to ensure adequate resources are available to support Army intelligence goals. The Army will complete the review in June 1984.

Chemical and Nuclear Matters

The health and safety of our nation dictate the Army's significant interest in chemical and nuclear matters. In these areas the Army was concerned with the following activities this fiscal year: nuclear test personnel review; technical assistance to the Nuclear Regulatory Agency; the Army Agent Orange Task Force (AAOTF); the NATO Nuclear Planning Group; the toxic chemical demilitarization program; and nuclear, biological, and chemical (NBC) warfare capabilities.

During the year the Army's Nuclear Test Personnel Review (NTPR) team, working under the auspices of The Adjutant General (TAG), continued identifying all Army participants in atmospheric nuclear testing which occurred between 1945 and 1962 and reporting any radiation exposure danger to the participants. The review, whose executive agent is the Defense Nuclear Agency (DNA), resulted from the discovery in 1977, by the Centers for Disease Control (CDC) in Atlanta, Georgia, of a possible leukemia cluster among participants in a test held at Smoky, Nevada, twenty years before. After a review of historical records and individuals' service records, the Army team has identified 47,000 out of an estimated 50,000 participants. The team also has responded to 1 White House inquiry, as well as 23 congressional, over 450 Veterans Administration (VA), and 190 individual inquiries on the subject. During the year, the activity moved to Washington, D.C., to unite with other federal agencies involved in health-related research.

The U.S. Army Corps of Engineers (USACE) provided technical assistance to the Nuclear Regulatory Commission (NRC) in two areas this year. Waterways Experiment Station (WES) evaluated the stability of slopes at the Limerick Generating Station nuclear power plant and determined the support requirements in potentially unstable zones. The results of the WES study supplemented the NRC's review and evaluation for the Final Safety Analysis Report for the power plant. WES also assisted the NRC in the development of criteria for evaluating alternative methods for disposal of low-level radioactive wastes. WES prepared

guidance for site characterization and monitoring for such alternative methods as above- and below-ground vaults, earth-mounded concrete bunkers, mined cavities, and augered holes. The NRC developed present regulations specifically for shallow land disposal in trenches.

During FY 83 the AAOTF remained the primary office of DOD dealing with the ongoing controversy and resulting studies stemming from the use of herbicides in the Vietnam War. The task force continued to provide records and information to government agencies and private entities involved with collecting data, undertaking studies, and conducting litigation on behalf of Vietnam veterans.

In February 1983 the Centers for Disease Control, under pressure from Congress, had assumed from the VA responsibility for conducting an epidemiology study to determine whether Vietnam veterans had been adversely affected by Agent Orange exposure. The CDC requested AAOTF's help in protocol planning for the study. On 31 May 1983, the AAOTF provided the CDC with a draft protocol, which included the service number and location of 1,000 male Vietnam veterans as well as data essential in determining availability, completeness, and locations of records. To find this information, the AAOTF researchers thoroughly combed the Vietnam War records collection as well as each individual's personnel file (201 record) from the National Personnel Records Center (NPRC) in St. Louis, Missouri. The protocol called for the AAOTF eventually to provide 30,000 study subjects.

Concurrently the AAOTF continued its support of the CDC Birth Defects Study, which is attempting to determine whether Vietnam veterans exposed to Agent Orange have a greater likelihood of fathering a child with a birth defect than those not exposed. By August 1983 the AAOTF had provided CDC with approximately 600 thoroughly researched cases, with each subject classified into one of five categories, ranging from "Exposure Extremely Likely" to "Exposure Extremely Unlikely." The AAOTF anticipates that this study will conclude in late 1983 and that CDC will have its first report of the Birth Defects Study ready in early 1984.

The expansion of AAOTF responsibility grew sharply on 18 April 1983, when the VA Administrator requested that the Secretary of Defense provide data needed to adjudicate Post Traumatic Stress Disorder (PTSD)—a broad-ranging psychological unrest related to the Vietnam War experience—claims, which could involve supplying documentation on an estimated 5,000 to 10,000 cases annually. On 9 May 1983, Secretary of Defense Caspar W. Weinberger committed the AAOTF to provide the VA

with the requested data. By the end of this fiscal year, the AAOTF had received over 100 PTSD inquiries.

In addition to this work, the AAOTF has played or will play a major role in the following scientific studies: a VA study comparing the mortality rates of Vietnam veterans with Vietnam-era veterans who did not serve in Vietnam; a Veterans Administration/Environmental Protection Agency (VA/EPA) study of the correlation between Vietnam service and dioxin levels in fat tissue; a VA study comparing the health experience of twins, one of whom served in Vietnam; a National Institute of Occupational Safety and Health (NIOSH) registry of U.S. production workers who may have been exposed to dioxin (This registry when complete will be used to compare causes of death in these workers in comparison to the U.S. population.); VA and CDC case-control studies of soft tissue sarcoma (a rare malignancy); and an Armed Forces Institute of Pathology study of the relationship between various medical diagnoses and service in Vietnam.

Other AAOTF activities include information exchanges, in the form of letters, briefings, and documents, with state Agent Orange commissions, the VA, individuals, veterans groups, Congress, and the Australian government. As a result of interest shown by veterans groups and Congress, the AAOTF is currently compiling a census of women Vietnam veterans and, as of the end of this fiscal year, has identified 4,850 women who served in Vietnam. In reponse to queries from the Australian government concerning Agent Orange, the AAOTF has declassified numerous DOD documents covering periods of mutual involvement in Vietnam which the U.S. government shared with Australia.

Throughout 1982 and 1983, the AAOTF personnel examined, catalogued, and reproduced several thousand documents in the Agent Orange product liability litigation, the class action suit filed in the Eastern District Court of New York. Although DOD is not a party to the suit, there is an overriding interest in DOD documents since both the industrial and chemical defendants and the veteran plaintiffs hope to use them to win the suit. The court proceedings in this case may begin as early as April or May 1984.

In FY 83, the High Level Group, consisting of assistant ministers of defense of the NATO Nuclear Planning Group, continued its study of NATO's requirements for Short-Range Nuclear Forces begun in 1981. This review addressed Pershing Ia, Lance and Honest John Missiles, gravity bombs, and Artillery-Fired Atomic Projectiles (AFAPS). Key elements of the study were that the NATO nuclear stockpile would, over five to six years, be unilaterally reduced by 1,400 weapons, leading to a stockpile level

of 4,600 weapons; the stockpile would be stabilized through at least 1994; the stockpile would be modernized concurrent with reductions to forestall an unacceptable increase in the risk level. The Nuclear Planning Group invited the USSR to reciprocate with comparable reductions in its expanding Nonstrategic Nuclear Forces (NSNF) stockpile, but also noted that the decision to reduce might have to be reconsidered should a significant increase occur in the Soviet threat. The study report should be finalized by the High Level Group and forwarded to the Nuclear Planning Group ministers early in the coming fiscal year.

As for nuclear weapons for operational forces, the Army experienced no major changes in FY 83. Congressional proponents of opposing nuclear positions maneuvering for advantage put into question the future of certain nuclear systems and preparations for their replacements. While Congress pushed for a termination of the improved 155-mm. nuclear replacement, the Army pressed to maintain at least research, development, test, and evaluation (RDTE) for the system. Production of the improved 8-inch nuclear projectile continued with the system's being placed in the stockpile. Preparation of Army units to receive the Pershing II also remained a high priority, with training focusing on new procedures to reflect the reduced response time of the Pershing II. No major changes in nuclear warhead operations occurred. The replacement of the nuclear-capable Nike Hercules with the nonnuclear Patriot air defense system continued, and Congress extended support for NATO Nike Hercules (and Honest John) beyond the Nike Hercules phaseout by U.S. forces. Congress, however, resisted the Army's initiatives to develop a nuclear warhead for the Joint Tactical Missile System (JTACMS) as a follow-on for the Lance.

The Army continues to make significant progress in the toxic chemical demilitarization program. Research efforts at the Chemical Agency and Munition Disposal System (CAMDS), Toole Army Depot, Utah, support the design and construction of the Johnston Atoll Chemical Agent Disposal System, scheduled to be built in FY 85 on Johnston Island in the Pacific. The Army will construct similar facilities at CONUS sites to dispose of obsolete M55 rockets and M3 land mines during FY 86. Operations of the Drill and Transfer System (DATS) to demilitarize defective munitions at Lexington-Blue Grass Depot Activity, Kentucky, are near completion. The DATS will continue operations during FY 84 at Umatilla Army Depot Activity, Oregon, and Pueblo Army Depot Activity, Colorado. The Army also concluded lethal chemical demilitarization operations at Rocky Mountain Arsenal (RMA), Colorado, disposing of 21,458 chemical agent identification training sets. In the future, the Army will use the demilitarization facilities

at RMA to dispose of the riot control agent Adamsite as well as DDT-contaminated small arms ammunition returned from Southeast Asia.

Congress approved requests for funds to construct the BZ (3–quinuclidinyl benzilate) Disposal Plant at Pine Bluff Arsenal, Arkansas, in FY 84. The plant is designed to dispose of the incapacitating agent BZ, BZ-filled munitions, and contaminated wastes and to allow for the easy conversion of equipment so as to permit the disposal of other lethal chemical munitions and agents.

Because of the sensitivities of the population of the Pacific region to environmental issues, the Army is preparing an Environmental Impact Statement (EIS) before requesting funds from Congress for the Johnston Island facility. The draft was announced in July, and the public comment period ended on 6 September 1983. Preparation for the final EIS is under way.

During FY 83 the Army continued to upgrade its NBC warfare capabilities. The Army activated two additional NBC companies to support the 2d Infantry Division in Korea and the 5th Mechanized Infantry Division at Fort Polk, Louisiana, with the company at Fort Polk becoming the first chemical unit to convert to the new Division 86 design. Major design changes included moving the NBC reconnaissance capability to the divison's armored cavalry squadron and adding one additional decontamination platoon and one new smoke generator platoon to the NBC company. The smoke addition provided division commanders with the capability of generating large-area smoke screens to conceal friendly forces and obscure the enemy, thereby increasing combat power.

The Army also persisted in modernizing the NBC warfare capabilities of reserve components. It activated two divisional NBC companies in the Army National Guard (ARNG) and one additional decontamination and two smoke generator companies in the Army Reserve. As a result the overall number of NBC specialists on active duty increased from 6,700 in FY 82 to 7,500 during FY 83. Reserve components strength grew to 7,800 soldiers, as they assumed a larger share of the Army's NBC defense mission.

The U.S. Army Chemical School expanded to accomplish its important NBC training mission. The student census increased from 3,600 in FY 82 to 5,200 in FY 83. They completed an initial NBC Mission Area Analysis that established the training, doctrine, equipment, and force structure framework for continuing future improvements.

The Army's major commands and reserve components received $63.7 million to purchase stock fund chemical defense

equipment under the Army's Operations and Maintenance (OMA) appropriation. The FY 83 Army procurement program provided another $47.9 million for NBC protective masks and modular NBC collective protective equipment. In May 1983 the Army began procurement of the Battle Dress Overgarment (BDO), a camouflaged chemical protective (CP) overgarment that provided enhanced NBC protection. The new BDO uses the same woodland pattern camouflage overprint as the Battle Dress Uniform fatigues but offers better protection for the soldier than does the currently fielded CP overgarment.

In August 1983 the M13 portable decontaminating apparatus became standard equipment for the Army, replacing the M11. The M13 provides larger decontaminating volume and is designed with brush-scrubbing and hand-pumping capabilities. The M272 Water Testing Kit became an expendable stock fund NBC item in January 1983. This kit is used to detect the presence of chemical warfare agents in water.

In the first quarter of this fiscal year, the XM76 smoke grenade, infrared (IR) screening entered full-scale engineering development. The smoke grenade, which is fired from grenade launchers, will provide extended armored vehicle smoke protection coverage in the mid- to far-IR region of the electromagnetic spectrum. In December 1982, the improved 155-mm. WP smoke-screening projectile M825 became standard equipment for the Army. The M825 projectile is twice as effective as the M116 smoke projectile it replaces.

In October 1983 the Board on Army Science and Technology (BAST), Commission of Engineering and Technology, National Research Council, completed the study, "Protection Against Tricothecene Mycotoxins." The BAST committee studied the biological behavior of T-2 and significant related mycotoxins so that defense against their actions might be appropriately and efficiently designed. It concluded that no known specific antidote exists; protective masks, clothing, or shelters can greatly reduce exposure; and removal with soap and water or household bleach can reduce severity. The committee acknowledged that the current U.S. Chemical Protective Ensemble will fully protect the wearer against these toxins. It also recommended that the Army initiate programs to better identify global distribution of the toxins, and to develop field sampling protocols, materials to degrade toxicity, methods to reclaim contaminated food supplies, detailed assessments of biological effects, methods to prevent exposure, and medical treatments of exposed personnel.

Achieving a verifiable chemical munitions ban, and the maintaining a credible deterrent as well as a retaliatory capability should deterrence fail, have continued to drive the Army's

chemical modernization efforts in FY 83. This focus was reflected in the president's budget request, which included $158 million to facilitate the initial production of binary munitions (the 155-mm. GB–2 artillery projectile and BIGEYE VX–2 bomb) and retaliatory research and development (R&D).

At the beginning of the fiscal year, as part of its modernization efforts, the Army began to facilitate the production of Phase 1 of the 155-mm. GB–2 artillery projectile at Pine Bluff Arsenal. It should be completed by September 1984, with the first tests scheduled to take place by February 1985.

The BIGEYE program, on the other hand, has had a mixed year. Technologically the BIGEYE enjoyed some success. A pressure buildup problem, discovered by the Navy in late 1982, was solved by accelerating and improving the mixing system and adopting an "off station" mixing concept, as four flight tests run during May through September 1983 demonstrated. Politically, however, the BIGEYE has not fared well. Opponents to the binary program focused their attention on the BIGEYE developmental problem and continued to attack the binary modernization program. Using the BIGEYE problem as a lever, these congressmen attempted to undercut DOD credibility with the rest of Congress even in the face of continued successful operational tests. Their efforts culminated in a General Accounting Office (GAO) review of an alleged BIGEYE problem cover-up. The investigation is still ongoing.

After extensive deliberation and debate, the Congress did authorize the chemical modernization program, but failed to appropriate procurement and construction funding for 1984, thus delaying modernization for at least another year. The funding of R&D work on binary chemical weapons systems became small consolation for the loss of modernization initiative and impetus.

Nevertheless, the Army continues to seek approval to modernize the binary weapons stockpile. As this stockpile continues to lose its ability to support national objectives, the need to modernize becomes increasingly important if the United States is to achieve its goal of eliminating the threat of chemical warfare from the community of nations.

Military Support to Civil Authorities

This year, while in the midst of its modernization drive, the Army continued the practice of lending support to civil authorities. Benefiting from the Army's support this fiscal year were the 1984 Olympic Games Committee; federal agencies fighting the illegal flow of narcotics into the United States; the U.S. Secret

Service (USSS); the nation's Water Preparedness Program; and natural disaster relief and emergency operations.

This fiscal year Secretary of the Army Marsh set in motion plans to lend military support to the 1984 summer Olympics. In July 1983, the Director of Military Support established a multiservice Olympic Support Task Force to coordinate and provide military assistance to the Los Angeles Olympic Games and to federal and local law enforcement agencies. By the end of the fiscal year the Olympic Support Task Force had received and processed ten formal requests for military support.

FY 83 also saw the Army become involved in assisting federal agencies to stem the flow of narcotics into the United States. On 23 March, the president announced the formation of the National Narcotics Border Interdiction System (NNBIS)—a compilation of federal agencies and DOD departments working together to interdict the flow of narcotics into the United States. The vice president chairs NNBIS, and his chief of staff runs the operation. The Army's participation includes stationing personnel at each of the six regional NNBIS centers throughout the United States: New York, Chicago, El Paso, New Orleans, Long Beach, and Miami; and loaning aircraft, vehicles, and other items.

The Army also supported the Secret Service during this fiscal year, primarily in providing transportation and bomb search assistance in connection with the travel of VIPs authorized USSS protection. The Army completed over 875 such missions in the Continental United States and overseas during the year.

During this fiscal year the Army assumed responsibility for water preparedness planning from the Department of Interior, effective 28 April. The Secretary of the Army further delegated these responsibilities to the Assistant Secretary of the Army for Civil Affairs (CA) and through him to the Corps of Engineers. The Corps organized a civil works task force for water preparedness to determine its water preparedness mission, program responsibilities, and the resource levels required to accomplish the mission.

The mission and responsibilities developed by the task force were to ensure the nation's readiness to respond to national security and domestic emergencies by: (1) developing overall plans for the management, control, allocation, and use of water and water resources of the nation, consistent with plans of other federal agencies having specific water responsibilities; (2) establishing a system of priorities and allocations for the emergency production, distribution, and use of water and water resources; (3) providing guidance and assistance to, and coordinating plans with, other federal agencies, states, local governments, and the

private sector; and (4) achieving and maintaining implementation capability through data collection and analysis, training, exercises, research, and human resources development.

The task force estimated that the mission would require approximately $1.1 million and 14.5 man-years in FY 84 and FY 85 and approximately $5 million per year and 154 man-years in FY 86 through FY 90. Headquarters, U.S. Army Corps of Engineers, would hold approximately 80 percent of the resources in the first two years, while the Corps' field offices would contain 90 percent of the resources in the next five years. Besides providing national leadership during peacetime for water preparedness, and thereby improving national security, the Corps' activities also should enhance the nation's ability to deal with water resources by the year 2000.

The Corps also responded to widespread problems involving civilian communities across the nation again this fiscal year. Such emergency activities included technical assistance, rehabilitation, advance measures, and flood-fighting assistance. The Corps participated in major emergency operations in California, Utah, the upper Colorado River Basin, the lower Mississippi Valley, south Mississippi, Alabama, Texas, southern Missouri, and Arkansas.

Flooding along the coast and in the central portions of California resulted in the Corps' providing technical assistance to local interests and, in some cases, immediate flood fight support. When the snow-melt runoff caused mud slides in Utah, the Corps provided advance measures, such as emergency pumping of water impounded behind the landslide to prevent overtopping and failure of the embankment created by the landslide, constructing temporary levees, and furnishing sandbags and technical assistance. Flooding in the upper Colorado River Basin resulted in the Corps' coordinating with the Bureau of Reclamation concerning appropriate flood control releases from Hoover, Parker, and Davis dams. In support of emergency flood fight efforts in the lower Mississippi Valley, the Corps provided state and local organizations with numerous sandbags, pumps, and polythlene sheeting. After flooding in south Mississippi and Alabama the Corps furnished sandbags and technical assistance to local authorities and compiled damage survey reports for the Federal Emergency Management Agency (FEMA). When a hurricane hit Alicia, Texas, causing extensive damage along its path, the Corps worked with the Coast Guard in replacing marking buoys and lights lost in the storm, besides providing other emergency measures. In early December 1982 southern Mississippi and Arkansas received extensive flood fight and tornado damage assistance from the Corps. The Corps helped remove nine sunk barges from the Arkansas River.

Despite Corps participation in many emergency operations, emergency fund expenditures in FY 83 fell below the historical average. Out of an emergency fund appropriation of $54,877,000 the Corps spent $42.4 million. Of these funds, it used $15.5 million in the Mount Saint Helens area and over $10.5 million for emergency activities across the country. Although the cost of rehabilitation efforts is expected to be high, the Corps expended only about $7.5 million on them, as most rehabilitation work began late in the fiscal year.

During FY 83 the Army improved the combat readiness of its operational forces in a number of ways. It made force structure consistent with the Army 86 Modernization Plan; recruited quality personnel; improved basic training programs; modernized equipment; fielded new equipment overseas; and modernized intelligence activities. While in the midst of its modernization drive, the Corps played a key role in chemical and nuclear matters and lent support to civil authorities in such areas as narcotics control, water preparedness, and disaster relief. Such activities helped the Army to achieve the qualitative edge it sought.

3

Force Development and Training

During FY 83, the "Year of Excellence," the Army moved forward with plans and programs to build and train forces, soldiers and leaders, for the purpose, as described by General William C. Richardson, Commander, U.S. Army Training and Doctrine Command (TRADOC): "To meet and defeat any adversary, at any time, on any battlefield." To meet this goal, the Army continued its force modernization efforts, updating and carrying out modernization plans, including those pertaining to the Army 86 Modernization Plan, making force structure modifications, such as Division 86 and the light division concept, improving the combat power, deployability and sustainability of all Army divisions, preparing for mobilization, and determining the emphasis and focus of their training.

Force Development

On 22 November 1982, the Army published the second edition of the Force Modernization Master Plan (FMMP), which provides direction for the Army's force modernization efforts. Inherent in this plan is a detailed road map showing both system and organizational modernization activities scheduled during the 1980s and 1990s, and an assessment process that measures the ability of the Army's major commands (MACOMs) to execute the plan. In large part, these assessments aid Army planners in modifying key programming and budgeting guidance documents, including the Army 90 Transition Plan, the Army Modernization Information Memorandum (AMIM), the Army Plan, and the FMMP itself.

Consistent with modernization efforts, this fiscal year Active Component (AC) and Reserve Component (RC) units in both CONUS and USAREUR began converting to the Division 86 Organizational design for improved operational effectiveness and increased combat capability of both existing and new weapons systems, such as the M1 Abrams tank, the M2 Bradley Fighting Vehicle, the multiple launch rocket system (MLRS), and the UG 60A Black Hawk helicopter. Modernization efforts included activating new organizations, fielding new systems into new organizations, fielding new systems into existing organizations, and

transferring some older systems into both AC and RC organizations.

TRADOC also continued with another aspect of Army 86 planning—the study of the air assault/airborne division (AA/AB). TRADOC's goal was to design two highly mobile divisions to meet both contingency and NATO combat requirements. The study incorporated basic Army 86 precepts including integrating air-land battle concepts, incorporating programmed new equipment into the divisions, initiating requirements for materiel to meet identified needs, and optimizing human resources.

Following the methodology used in the development of Division 86, TRADOC schools and integrating centers designed the air assault/airborne divisions to perform the critical battlefield missions prescribed by the TRADOC Battlefield Plan. To promote standardization, yet keeping unique mission requirements of the airborne and air assault divisions, TRADOC incorporated in AA/AB 86, where applicable, previously approved Army 86 designs as well as many recommendations from the 82d and 101st Airborne Divisions.

Also consistent with the Army 86 Modernization Plan, the Army staff, in a joint effort with the Air staff examined broad strategic concerns, but primarily focused on intratheater airlift needs during FY 83. Their study produced the Long-Term Airlift Modernization Report (LTAMR), in which an analysis of various snapshots from theater operational plans, that depicted delivery of combat forces and equipment into forward-austere runways, indicated that combat units could move faster when using several short-austere runways in an operational area rather than be restricted to a single main sophisticated operating base. After examining various alternative airlift capabilities, the report concluded that the Air Force's C–17 aircraft, currently in engineering development, would ideally meet the Army's airlift needs. The study team members briefed the final report through the Deputy Operational Deputies of the Office of the Joint Chiefs of Staff (OJCS) and forwarded it to OJCS J–4 (Logistics Section) for recommendation.

An important aspect of force development and training is the updating of field manuals to incorporate and then disseminate the changes in combat operations doctrine. In July 1983, TRADOC published the final draft of a field manual for large unit combat operations—FM 106–16, "Echelons Above Corps: Support Operations." This draft field manual filled a doctrinal void. Recent Army doctrine in the Echelons Above Corps (ELAC) was written for the division level, and now the Army is broadening its scope. The Army expects publication of the approved manual in FY 84. A complementary effort addressing larger unit

combat operations (echelons above corps) is underway at the Combined Arms Center, Fort Leavenworth, Kansas, in cooperation with the Army War College, Carlisle Barracks, Pennsylvania. The Army staff will assist in the staffing and finalizing of this major doctrinal initiative.

The Army's emphasis this year on high technology divisions resulted in the establishment of the U.S. Army Development and Employment Agency (ADEA), in April 1983, as a Field Operating Agency (FOA) of Headquarters, Department of the Army (HQDA), replacing the High Technology Test Bed (HTTB). ADEA's mission is to identify, evaluate, and expedite operational concepts, organization, and materiel requirements, which improve the combat power, deployability, and sustainability of all Army divisions, concentrating on the light infantry units. While supporting the transition of the 9th Infantry Division to a High Technology Motorized Division (HTMD), ADEA will act as the Army "skunkworks," exploring new concepts, high technology equipment, and innovative tactics under field conditions.

Following conversion to the HTMD, the 9th Infantry Division will have the capability to deploy rapidly to a contingency area. Once there it will be able to defeat enemy forces ranging from light infantry to tank or motorized units in organizations. The Army is structuring the division primarily for a Southwest Asia environment but with the capability of use in NATO. Upon complete conversion to HTMD, the division will retain part of its organization in a test bed role in support of ADEA and other light and heavy division efforts.

Other major events this fiscal year concerning the development and employment of tactical forces included manpower surveys on 9 December 1982 and 16 May 1983, the submission to the Combined Arms Combat Development Activity (CACDA) of twenty-two Quick Reaction Program (QPR)/Required Operational capability documents and nineteen major tests, eleven in conjunction with 91D Field Training Exercises LASER MACE (May 1983) and CABER TOSS (September 1983).

LASER MACE, a tactical exercise designed to train and test the High Technology Light Battalions, exercised the Light Motorized Infantry Battalion (LMIB), the Light Attack Battalion (LAB), the Mobile Assault Gun Battalion, the Light Air Cavalry Troop, the Military Police Company, the NBC Company, the Military Intelligence Forward-Support Company, and the Airborne Surveillance concept. Exercise CABER TOSS, a logistical exercise designed to evaluate the Army's ability to support the High Technology Light Brigade on maneuvers, tested the Forward-Support Battalion, the Dual Purpose Chemical Platoon, and the Palletized Loading System. The remaining tests the Army

conducted during the year included: January–February: Mounted Teampack, Extended Cold and Wet Clothing System; July: Fighting Load, Existence Load Hot and Dry Clothing System, Physical Fitness Sustained; and August: Light Attack Company.

During FY 83, ADEA experienced much growth and change. The Army established a TRADOC liaison element with liaison officers from each of the TRADOC integrating centers and schools, and developed plans to add a Combat Developments Experimentation Command (CDEC) Board in early 1984 at Fort Lewis, Washington, to assist ADEA. With the inclusion of the on-site DARCOM (U.S. Army Materiel Development and Readiness Command) Materiel Support Activity, the organizational combination of TRADOC, DARCOM and FORSCOM participation underlines the Army's emphasis on the light infantry divisions into the 1990s and beyond.

The Defense Intelligence Agency's (DIA) damage criteria study and force mix analysis are efforts to determine the proper mixture of U.S. strategic forces in the drive to modernize and expand them. The Army actively participated in these efforts to ensure that strategic planners maintain a proper perspective on requirements for a balanced nuclear and conventional deterrent. Recognizing the need for an effective strategic deterrent, Army leaders strived to ensure that the large costs associated with such systems did not result in loss of the conventional military capabilities that are essential for a balanced deterrent. Hence, the Army is working to ensure that strategic modernization does not jeopardize the maintenance of conventional capabilities that provide options in responding to expected challenges from potential enemies. In other words, that funds for modernization do not detract from funds for spare parts. Additionally, the Army is pursuing the President's Strategic Defensive Initiative (SDI) that allows a more balanced approach between offensive and defensive forces. Within the next year, this effort will be more focused as DOD decisions and guidance are forthcoming on appropriate approach roles and missions related to SDI.

Of major importance to force modernization during FY 83 were the U.S.–USSR Nuclear Disarmament and Force Reduction talks. Regarding Intermediate-Range Nuclear Forces (INF), Rounds IV, V, and VI, took place this year. Initially the U.S. proposed its "zero-zero" solution, in which the U.S. would agree not to deploy its Army controlled Pershing II (PII) and ground-launched cruise missiles (GLCM) in return for Soviet destruction of all of its SS–20 missiles. At the end of Round IV, however, the U.S. proposed an interim solution for equal and finite levels of missiles on both sides. The Soviets rejected both proposals. Furthermore, during Round VI, the U.S. proposed to apportion any

reductions between both the PII and the GLCM. The Soviets' demands that French and British nuclear forces be included in any agreement and the deployment of U.S. INF missiles to Europe became major points of contention between the U.S. and the USSR. By the end of FY 83 an agreement had not yet been reached.

Talks also centered on the U.S. START proposal, whose main objective calls for a significant reduction in ballistic missile warheads and limits on deployed Intercontinental Ballistic Missiles (ICBMs) and heavy bombers. During Rounds II (Fall 1982) and III (Winter 1983), working committees laid the groundwork that led to the tabling of the U.S. Draft Treaty in Round IV (Summer 1983). The period between Rounds III and IV was frenetic as the START Interagency Group worked to develop and adjust the treaty in light of major Soviet concerns expressed during earlier sessions and the impact of the presidential Commission on Strategic Forces report (the so-called Scowcroft report) released in April.

Throughout the period of negotiations and in preparation for Round V (Fall 1983), the Army played an important role in expressing views on the balance of arms control issues, the modernization of strategic forces, and the maintenance and improvement of general purpose forces. While the U.S. and USSR made little measurable progress towards a START agreement in FY 83, the U.S. did improve its proposal, and the service staffs, in support of the JCS input to the START Interagency papers, continued to work on the serious issues not yet resolved. The Army's role as "honest broker" may become increasingly important in the future as the arms control community develops the U.S. approach to further rounds of START. The Army views effective arms control as a vital aspect of U.S. National Security Policy.

During FY 83 the first year Total Army Analysis (TAA) was conducted on a biennial basis, the Army, in its quest for excellence, initiated TAA 90. Through TAA 90, the Army analyzed and programmed major force structure initiatives regarding its light forces. The results of TAA 90 became the force structure basis for Program Objective Memorandum (POM) covering FY 86–90.

This year the Air-Land Battle doctrine, exemplified in FM–100–5, became the cornerstone of the Army of Excellence, as the Army and the U.S. Air Force took important joint initiatives concerning the doctrine and future concepts. The Air Force agreed to use the Air-Land Battle doctrine in conjunction with its aerospace operational doctrine (two-series manuals) as the basis for the conduct of joint combat operations and to use the AirLand Battle field manual as the basis for joint tactical training and field

exercises. Subsequently, additional agreements expanded the scope of the two services' joint efforts in such areas as development of joint tactics, techniques, and procedures. Building on the 10 August 1982 update of AirLand Battle 2000, TRADOC is working to develop force designs and functional subconcepts to support the overall operational concept. This effort is linked to the FOCUS 21 process to develop a joint Army and Air Force future concept based on AirLand Battle 2000 and Air Force 2000. During July 1983 an initial draft of FOCUS 21 was staffed; the concept is being refined based upon the initial staffing.

To ensure that future doctrine and the doctrines of its Allies are compatible and to improve interoperability, the Army has maintained close liaison with them concerning the Air-Land Battle doctrine. The Army has participated in bilateral staff talks with Britain, France, and Germany, and in discussions with Australian, British, Canadian, and American representatives on the subject.

In the last quarter of FY 83, the Army took an important step toward excellence by tasking the Training and Doctrine Command (TRADOC) to design a new light infantry division that could be deployed more rapidly than existing heavy divisions in the first days of an impending crisis, and to diffuse the crisis with a show of force, thereby to preclude possibly the deployment of greater forces later. TRADOC will present the design at the October 1983 Army Commanders' Conference. It calls for an elite, hard-hitting light infantry force of approximately 10,000 personnel with high ratios of combat power to overall strength and of officers to enlisted men. The entire division of nine infantry battalions is to deploy in 500 or less C–141 sorties and to capitalize whenever possible on lessons learned from the experience of the High Technology Light Division (HTLD). The Army would use the division primarily for low- to mid-intensity contingency missions in undeveloped theaters and secondarily, when augmented, for missions in Europe and Southeast Asia.

To respond to low-intensity conflict in the Third World and in non-NATO areas, the Army also plans to use the Special Operations Forces (SOF). Since 1981, the Army staff, in conjunction with the John F. Kennedy Center for Military Assistance, Fort Bragg, North Carolina, has been reviewing the broad strategic roles of SOF in the decade ahead. The review suggested that there was a void in national strategy and force capabilities at the precrisis and low-intensity conflict levels and reconfirmed the need for SOF skills. This review led to the Chief of Staff of the Army (CSA) tasking TRADOC, in 1982, to conduct a SOF Mission Area Analysis (SOFMAA) to identify deficiencies of SOF and recommend solutions for these areas. TRADOC

completed the SOFMAA in June 1983. As a result, to prepare, provide and sustain SOF, the Army formed the 1st Special Operations Command (1st SOCOM) as a major command subordinate to FORSCOM this fiscal year. The Army also established the John F. Kennedy Special Warfare Center under TRADOC. These two organizations helped the Army to correct the major deficiencies identified in the SOFMAA. TRADOC began developing doctrine for Rangers, reconnaissance, aviation, and an SOF "umbrella" manual, while the Special Warfare Center began revising doctrinal manuals and the how-to-fight manuals as required in the areas of Special Forces, civil affairs, psychological operations, and low-intensity conflict.

Consistent with Army preparedness, the Deputy Chief of Staff for Operations and Plans (DCSOPS) established the Force Planning Analysis Office (FPAO) in July 1983 as a field operating activity and "think tank." Based on its assessment of congressionally imposed limitations on materiel, men, and money, the FPAO examined alternative force structures and issues. By conducting such force structure assessments, force analyses, and special studies, FPAO provides a quantitative basis for Army force planning, force structuring, and force programming decisions in a period of austere budgets. FPAO projects for the DCSOPS include determining the most effective Total Army that best meets strategic and mission requirements within resource constraints, analysis of the light infantry division, and analysis of the capabilities of the Total Army force.

Sustainability

The composition of forces greatly influences their sustainment criteria overseas during combat. An armored division naturally requires a greater daily tonnage of all classes of resupply than does a light infantry division. In force development, therefore, the Army must take into account war reserves, POMCUS, and host-nation support. During FY 83, the Army made improvements in these factors to support an Army of Excellence.

For FY 83, war reserve secondary items, which are on-hand and are intended to provide support (for weapons systems and for the individual soldier) to sustain operations until resupply from CONUS can occur, were funded at $470 million—$249 million for Procurement Appropriation (PA) and $221 million for Army Stock Fund (ASF). To determine the need for war reserve secondary items for the Army's equipment, a new computer model, SES4WAR, was run for the first time in late 1982 and produced requirements that appeared excessive. During the first few months of 1982, the Army reviewed the model input and output,

deleted erroneous numbers, and used a new run from the model to prepare programming data for the five-year projection of cost. Henceforth the Army will update the data annually.

Also regarding war reserves, during FY 83, the Army maintained forty-one operational projects valued at over 1.8 billion dollars to support worldwide Army operational and contingency plans. The projects include pre-positioned and nonpre-positioned materiel and are intended to provide additional initial provisioning for Army units engaged in combat above and beyond current materiel authorizations.

Pre-positioned war reserve materiel stocks, as opposed to operational project stocks, are intended to sustain units once they are committed to combat. The Army acquires the reserve materiel in peacetime and stockpiles it overseas to reduce initial wartime transportation requirements and to ensure that Army forces can continue to fight until resupply arrives from the United States. Stocks pre-positioned in Europe and Korea will provide immediate logistical support to forward-deployed and reinforcing U.S., NATO, and ROK units in the event of war. Supplies pre-positioned in stateside depots support Army elements of the Rapid Deployment Joint Task Force.

Two significant actions affecting war reserves occurred this year. First, Congress reviewed and concurred with the Army's action to contract storage service facilities with the German government until NATO can provide these facilities. Such action enables the Army to increase sustainability in a significantly shorter period of time and to reap substantial savings. Second, the Joint Chiefs of Staff (JCS) removed temporary NATO construction limits for covered storage of war reserve materiel for Europe. After a review of the construction limits policy, undertaken at the request of our NATO Allies, indicated that the objectives of the policy (to obtain an early German decision on host-nation support and to improve Allied performance on pre-positioning division sets (DS) 4, 5, and 6) had been met, the JCS concurred that further limitations would constrain Europe's ability to plan for future sustainability requirements.

During FY 83 progress continued in the POMCUS program on several fronts. The Army filled divisional and nondivisional sets of equipment and constructed storage sites for DS 5 and 6 in Belgium and the Netherlands. Although Congress deleted funding for sets 5 and 6 in the FY 83 DOD appropriations bill, it subsequently approved a $5 million supplemental request. It authorized this supplemental funding to train civilian personnel who would be responsible for maintaining the Hendrick POMCUS site, scheduled to be completed on 1 March 1984 as the first in the series of POMCUS 5 sites. The Army also continued to

station a skeletal force of the 7th Support Command and a small element of the 54th Area Support Group in Rheinberg, Germany, and initiated plans to obtain congressional approval for acquisition of permanent facilities for these units as well as expansion of community support for remote sites in the western portion of northern Germany.

The Deputy Chief of Staff for Logistics (ODCSLOG) development of a new way to measure the effectiveness of POMCUS-stocked sites significantly influenced POMCUS planning for FY 83. DCSLOG measured effectiveness by the number of days of lift required to deploy the POMCUS force to Europe. Over the past year, Army supported actions to stock POMCUS sites have significantly reduced the days of lift required to deploy current POMCUS units overseas thereby strengthening the ability of the United States to support the 1987 Long Term Defense Plan for Europe.

In a second significant action, Congress approved $37.6 million in the FY 84 budget for POMCUS sets 5 and 6, but placed restrictive language in the bill that required the Army to ensure that for those items being shipped to DS 5 and 6, the Active Component and Reserve Component established requirement would not fall below 70 percent and 50 percent fill, respectively. An initial analysis determined that by, FY 89, 68 percent of the major items will be filled sufficiently in the AC and RC units to allow filling of DS 5 and 6 with POMCUS stocks. Although the legislation permits the Army to begin shipping equipment to these sets, it must closely balance the fill to meet the congressional restrictions.

In a third significant action, the Army developed a new POMCUS Authorization Document (PAD) process, which draws congressional attention to the POMCUS force through the budget years. The new PAD will consist of two volumes. The first identifies POMCUS requirements for the budget execution year; forces in Europe will use it to establish the requirements for that year. The second identifies requirements for the budget year and the five programming years; the Army will use it for planning and programming purposes.

The Army continued to emphasize the necessity of host-nation support (HNS) to satisfy some support requirements of its forces deployed overseas in times of crisis or war. The use of HNS resources to supplement U.S. military capabilities and force structure, within the bounds of prudent risk, is considered essential to achieve the support level needed to ensure that maximum combat power is available to forward-deployed and deploying U.S. forces.

In a major NATO-related HNS development, the U.S. and Federal Repulic of Germany (FRG) signed a reinforcement

exercise agreement in January 1983. The United States and German working groups are currently negotiating the specifics of the civilian and military portions. The latter provides for the formation of German reserve units of approximately 93,000 men to provide manpower (about 50,000 men) to support U.S. forces in time of crisis or war. The United States and Germany expect to complete negotiations and sign both technical agreements before the end of 1984. The United States also has negotiated umbrella and general technical agreements with Belgium, the Netherlands, Luxembourg, the United Kingdom, Denmark, Italy, and Norway, indicating that these countries can provide the U.S. with most of the host-nation support that it requests. The United States European Command (USEUCOM) is preparing joint logistical support plans to cover details of the host-nation support. It will make initiatives, when politically feasible, with the NATO southern flank countries of Spain, Portugal, Greece, and Turkey in order to develop such support. In developing joint logistical support plans, USEUCOM initiated action to establish Logistics Coordination Cells (LCC) to operate as the in-country extension of USEUCOM. These on-site LCC will be critical to continued rapid description of and agreement on detailed host-nation support of U.S. forces.

U.S.-HNS policy in Southwest Asia involved opening discussions with selected regional countries to explore the development of possible contingency support for U.S. forces. Although the political climate in the region has slowed initiatives, limited progress has been made in the areas of access agreements, prepositioning, and initial HNS talks.

In Northeast Asia, HNS focuses on the Republic of Korea and Japan. The combined-defense improvement projects (CDIP) program, the HNS effort in Korea, continues as a successful program. The U.S. currently benefits from Japan's support primarily by Japanese deferral of base rentals and construction costs.

Furthermore, WESTCOM has initiated a Friendly/Allied Nation Support (FANS) program to determine the capability of other Pacific countries to provide HNS for U.S. forces.

Mobilization

Well-planned, supported, and executed mobilization plans sustain units in wartime. To realize the level of excellence the Army sought during FY 83, mobilization efforts focused on mobilization planning review, augmentation and preassignment programs to provide pretrained individuals to Regular Army and Reserve Component units upon mobilization, and expansion of the training base.

Review of the Army's mobilization master plans (MMPs) for emergency-critical installations, begun by Corps of Engineers' districts in 1982, continued during FY 83. Instead of peacetime population data, the mobilization master plans are based on the task assignments, populations, and timetables of these installations in wartime. The methodology for preparation of these plans is flexible and allows for their expansion when the Army develops scenarios for "total" mobilization, which means a military involvement approaching the scale of World War II. This fiscal year, the Army completed plans for most of the 55 troop installations and for 10 out of the 25 ammunition plants, with some of the plans receiving their first update to incorporate revised planning information and new Corps of Engineers building designs. The advantage of the Corps' civil works districts preparing the mobilization plans is that their tasks include support of military installations within their areas. This enables many additional Corps personnel to familiarize themselves with military planning and construction procedures. Consequently, the procedure enhances their preparation to assume their mobilization assignment in wartime.

Another mobilization issue involved the augmentation and preassignment programs. Through these programs the Individual Ready Reserve (IRR) and the Retiree Mobilization Program continue to provide a pretrained manpower pool to meet unfilled mobilization requirements in the Regular Army and Reserve Component units. Of the 260,778 personnel in the Individual Ready Reserve, 8,124 Individual Mobilization Augmentees (IMAs) are preassigned to positions that would be filled during mobilization. Another 9,903 IRR members are also preassigned (includes Active Guard/Reserve personnel). An additional 208,168 personnel are earmarked by the September 1983 Mobilization Personnel Processing System (MOBPERS) to fill Active and Reserve Component units during mobilization. This past year the personnel pool on which the Army can draw during a period of mobilization increased as the Army identified an additional 27,000 enlisted soldiers of the IRR and brought them under reserve management for a total of 206,000. An extra 40,000 enlisted soldiers of the IRR were identified and placed under active management for a total of 120,000. The Retiree Mobilization Program has preassigned approximately 126,000 retired Army personnel to include 123,800 for CONUS positions and 2,200 for positions in Europe and Korea.

Expansion of the training base to meet mobilization requirements received unprecedented emphasis during FY 83. Army initiatives included traditional and innovative construction techniques and systems, such as leasing privately owned nonindustrial

facilities (NIP), fabricating polyurethane foam structures for temporary storage, stocking approximately 12,000 (General Purpose) GP-medium tents for use in overseas base development in support of a contingency, and supporting legislation to permit mobilization construction prior to an actual presidential declaration of a national emergency.

In mobilization planning, construction project requirements and facility types designs became of major importance. During the year, the Army received a total of ninety mobilization construction project requirements amounting to $5.7 million from CONUS-based installations (including DARCOM Army Ammunition Plants). Moreover the Congress appropriated $7.5 million for mobilization planning this year in an effort to develop standardized "M" drawings for eighty-five different facility types, which can be site-adapted once the design is authorized upon a declaration of emergency.

As a result, the mobilization facilities designs program continued to progress during FY 83. The program will include four phases corresponding to the relative importance of the facility types and will eventually develop standard designs for approximately 120 types of facilities. The first three phases cover the development of standard designs for temporary facilities. The fourth phase involves semipermanent facility standard designs. In 1981 and 1982 the Army contracted with two separate architectural and engineering (AE) firms for the phase I and II development. This year the Army contracted with a third AE firm for development of the phase III series of standard designs for twenty facility types. The phase I contractor completed 33 of 37 facility designs and should complete the final 4 by June 1984. The phase II contractor should complete 71 facility designs by August 1984, satisfying the contract requirements. The Army is currently evaluating the phase IV development of semipermanent facility standard designs and it should decide whether or not to continue phase IV by March 1984.

The facilities design development program suffered a setback this past year when Congress did not fund fully the FY 84 budget requests. From the original proposal for $13 million, Congress cut $9.5 million, which the Army was to use for adapting the standard drawings to specific sites in CONUS. According to Congress, inadequate site information caused the funding cut. The $3.5 million authorized for FY 84, however, appears sufficient to complete the standard design requirements at present identified. The Army anticipates an initial distribution to the Corps of Engineers' Field Operating Agencies (FOAs) of completed standard design in August 1984.

This fiscal year the Corps of Engineers' responsibility for preparing and executing construction required for mobilization received clearer definition when a description of this idea referred to as the Direct Support/General Support (DS/GS) concept, appeared in the Corps of Engineers Mobilization and Operations Planning System (CEMOPS) dated May 1983. The DS/GS concept aims to provide a single responsible mobilization Corps district for each mobilization installation. The concept also provides an important activity for districts normally engaged only in civil works because, as noted previously, it allows them to prepare in peacetime for their mobilization responsibilities.

For example, those districts charged with peacetime military construction responsibilities will provide direct support to all installations within their peacetime boundaries and are referred to as direct support (DS) districts. All other districts are in general support, thus general support (GS) districts. In peacetime, the DS district will serve as the single point-of-contact (POC) for its installations and is *responsible* for the preparation of installation support books (ISBs), mobilization master plans (MMPs), and mobilization construction. The DS district will task the assigned GS district with the *preparation* of ISB, MMP, and for the design and construction of preplanned mobilization projects once these projects receive approval. Relationships of the GS district to the DS district are similar to that of an architect/engineer firm to the GS district. This relationship is not intended to preclude all contact between the GS district and the installation. Taskings to the GS district will come through the DS district. For instance, during peacetime, the Savannah District is responsible for the military construction support of Fort Bragg, North Carolina, but, during mobilization, Wilmington District will also have responsibility for Fort Bragg. In support of its possible future role, Wilmington, as the GS district, is now preparing the ISB and the MMP for Fort Bragg. This first hand experience working with Fort Bragg should provide the basis of a solid working relationship in event of mobilization. Further, if the Army requires any premobilization design and/or construction, it will task Wilmington. However, the responsible district will remain Savannah, the DS district.

To date the Army has allocated funds for the ISB program, which consists of two subprograms and totals 101 installations—the 55 Reserve Component mobilization stations and the 46 DARCOM production base facilities (28 Army ammunition plants and 18 Army depots); the Army also has initiated 98 ISBs. The ISB provides essential information for use by the DS and GS district staffs and the on-site Corps of Engineers field representative to design and construct mobilization facilities at a specified

installation. The DS district is responsible for overseeing preparation of the ISB by the assigned GS district, which uses their organic capabilities in close cooperation with each installation. In general, ISB addresses points of contact, environmental and mobilization project information on a specified installation, and information on the supporting district.

The Corps of Engineers made significant strides in support of preparations for mobilization through a variety of initiatives during FY 83. Besides their work on ISBs, the Corps continued efforts on standardized mobilization facilities designs, considered other ways to meet expected construction needs, worked at obtaining more complete and specific mobilization construction requirements from historical and anticipated wartime users of Corps of Engineers' services, established exportable mobilization training packages for Corps personnel and developed draft legislation for mobilization construction.

By continuing efforts on standardized mobilization facilities designs ("M" drawings), the Corps of Engineers essentially completed 40 out of the 120 required designs at year's end and anticipates completion of the remainder by the end of next year. These drawings, which call for the use of readily available construction materials and contractors for all work, will enable the Corps to quickly build required construction should mobilization occur.

Wartime mobilization would cause significant shortages in troop housing and existing standardized facilities designs fail to meet all anticipated construction needs within an acceptable period. The Corps considered alternatives to meet expected construction needs, while minimizing the time lag between identification of requirements and occupancy. For example, the Corps is working on the feasibility of using hastily constructed, pressure-sprayed, quick drying, polyurethane "foam domes" as a partial solution to the anticipated extensive construction requirement of mobilization; a Corps laboratory is developing a stationing analysis model (SAM) to assist in the planning for mobilization at military installations. SAM will make available unclassified data on planned troop concentrations by installation once the program is functioning next fiscal year.

The Army also continued its efforts to obtain more complete and specific mobilization construction requirements from historical and anticipated wartime users of Corps of Engineers services. Based on experience during FY 83 the Corps anticipates working more closely with other federal agencies in order to assist them in determining their mobilization construction requirements. The rationale for this effort is that many of these projects will likely be

presented to the Corps, in its "Federal Engineer" role, for responsive execution.

This fiscal year the Army completed the first group in a series of exportable mobilization training packages for Corps of Engineers personnel, with more essential training to follow in the future. These courses will train Corps employees to accomplish emergency construction, procure materiels, and accept real estate responsibilities before and after the declaration of mobilization. Courses fielded during FY 83 included Military Construction Project Management (November 1982) and Real Estate Procedures (April 1983). Training packages nearing completion at the end of the fiscal year focused on Military Finance and Accounting Procedures, Military Construction Surveillance, Cost Reimbursement, Military Construction Design, and Expediting Materials and Procurement for Mobilization.

The Corps of Engineers developed draft legislation for mobilization construction during FY 83. The main thrust of the several legislative packages included maintaining the Corps in readiness to respond to extensive mobilization construction requirements, authorizing the president to direct the Chief of Engineers to perform construction if the nation's security is threatened (i.e., prior to a formal declaration of war or national emergency), authorizing the Corps to carry out work with any Army-specific funds available, enabling the Corps to terminate any projects determined not immediately necessary and shifting funds to other emergency projects, and authorizing the waiver of the requirements of any federal laws that are unreasonable in light of the circumstances of mobilization. The Corps will pursue efforts to gain Congress's approval of this package in FY 84.

This fiscal year technology transfer activities played an important part in mobilization expansion of the training base. The Environmental Technical Information System (ETIS), a remote terminal system operated and maintained by the University of Illinois, assisted Army planners to forecast and mitigate the critical economic consequences of any proposed action on an installation. All major commands in the Army and Air Force extensively use this system, which provides information via an 800 number. This year the Army also had access to the Computer-Aided Engineering and Architectural Design System (CAEADS), an on-line interactive graphics computer system, which integrates the professional contribution of the programmer, architect, engineer, and cost estimator in developing a concept design for a facility. Finally, Army mechanical engineers used the BLAST (Building Loads Analysis and System Thermodynamics) system in energy analysis of facilities.

The Army undertook a number of additional initiatives this fiscal year to expand the mobilization training base. Funding continued for refinement and/or development of second generation mobilization programs of instruction. These provide, together with TRADOC's Training Base Capacity Study, a comprehensive, validated list of resources needed to operate the training base on a full mobilization basis and satisfy the 180 day post mobilization training base output requirement (PMTBOR). During the second quarter of this fiscal year, reorganization and realignment of functions within the Training Directorate resulted in the transfer of the Training Base Mobilization Team from the Unit Training Division to the Institutional Training Division. At the end of this fiscal year, the Army completed and fielded the third iteration of the Mobilization Army Program of Individual Training (MOB ARPRINT). This planning document provides guidance for detailed expansion of the mobilization training base. The Army also completed preparations to transfer proponency of the Army Training Requirements and Resources System (ATRRS), which produces the MOB ARPRINT, from the Office of the Deputy Chief of Staff for Operations and Plans (ODCSOPS) to the Office of the Deputy Chief of Staff for Personnel (ODCSPER).

Training and Schooling

In 1983 training focused on combat readiness—a fundamental requisite of an Army of Excellence. To accomplish this goal, the Army consolidated its training strategy and inculcated it into the training programs and supporting materials being produced in the schools, expanded training facilities and courses of instruction, targeted training to individuals and systems, and conducted training with simulators as well as with new modernized equipment reaching the force for units to sharpen tactics.

In fiscal year 1983, the Army published its first Training Strategy as a portion of *Army Guidance Volume 1*. By providing a framework for the planning, programming, budgeting, and execution of training, the Training Strategy supports the Total Army mission of training both active and reserve components and prepares the training base for prompt and sustained land combat operations. Training Strategy also gives direction in individual and collective training and in the supply of products designed to support training. Recognizing that the training of individual soldiers is a continuous process from entry until release from active duty, the Army's Training Strategy includes a physical fitness program and guidance for training the new and junior soldier, the noncommissioned officer (NCO) as well as the commissioned Army officer. Focusing on wartime mission training requirements, collective

training guidance emphasizes systems-oriented training, support force as well as combined-arms combat unit training, and joint training efforts. In providing training support, the Training Strategy promotes the standardization of products designed to support training and directs that training is improved while remaining cost-effective.

Training forces for combat readiness is the first priority in today's Army. As the October 1983 Grenada operation demonstrated, well-trained, physically fit soldiers, psychologically prepared for combat, do perform well in battle. In FY 83, forces training had emphasized physical toughness, diagnostics, and realistic training, as well as the use of technology in maintaining individual and unit proficiency. Combat mission simulators, electronic devices, and extensive use of local training areas were a few of the training tools the Army had successfully integrated into its training program.

The National Training Center (NTC) at Fort Irwin, California, now in its second year of operation, provides an excellent training area to better prepare soldiers and leaders for combat. The two-week training course at the NTC teaches leaders and soldiers alike the combined-arms team tactics in field exercises as close to combat as the Army can devise. Exercises match "friendly" battalions against "opposing force" battalions in realistic, objectively assessed, fully instrumented force-on-force engagements (using eye-safe lasers) to demonstrate lessons in gunnery, tactics, logistics, and leadership. The level of realism allows soldiers to test their skills in a combatlike environment. The NTC course will witness eighteen battalion task forces training this year, including one reserve battalion.

There were other Army initiatives taken in order to improve the collective training effort. These included upgrading the Army Training and Evaluation Program (ARTEP) to incorporate expanded training and evaluation outlines that will allow commanders to evaluate better training performance and needs, and to plan more effectively to address these needs. To provide training in joint and combined teamwork, the Army participated in joint and combined exercises such as MOBEX (Fort McPherson, Georgia), LOGEX, PROUD SABER (throughout CONUS), REFORGER and TEAM SPIRIT (Korea) to a degree unprecedented in peacetime. Furthermore, the first RC battalion completed training at the NTC this fiscal year demonstrating the Total Army commitment. More than 400 RC units also participated in the Overseas Deployment Training (ODT) program, which provided in-country training. In summary, the forces training program prepared individuals and units to meet their responsibilities as part of the Army of Excellence.

The institutional training community has continued to seek, develop, and execute programs that transform civilians into physically tough, disciplined, and qualified soldiers. Such goals center on building a strong cadre of NCO trainers and training a capable officer corps in support of the Army of Excellence. Employing its resources wisely, enabled the Army to institute the light division, field major new weapons systems, and add new training courses. These, in turn, permitted the approval of directed military overstrength for 890 personnel in the training base in order to achieve the aims of the training program.

Another significant improvement in institutional training management occurred when the Army transferred the peacetime and mobilization ATRRS and MOB ARPRINT from ODCSOPS to ODCSPER. The transfer consolidated existing personnel automated systems to manage better accessioning, recruiting, and filling of programmed training slots with soldiers. ODCSOPS, however, remains responsible for training resources and policy determination within the institutional training arena.

Priority for the professional development of the career soldier has caused the expansion and implementation of several programs this year. Analysis revealed the weakest link in the Noncommissioned Officer Education System (NCOES) to be Skill Level 2/3 technical training for Combat Support/Combat Service Support (CS/CSS) soldiers. The Army responded with Primary Technical Courses (PTC) and Basic Technical Courses (BTC), which provide training in critical tasks to enable E–5 and E–6 NCOs to gain the competency required for their Military Occupational Specialty (MOS). A total of 151 courses will be available by 1986.

In a related action, the Army submitted for fiscal years 1985–89 the Program Objective Memorandum (POM). This POM interaction approved additional resources for the PTC and BTC programs, expanded most of the Officer Basic Courses (OBC) an average of four to five weeks, and increased the number of officers attending the Combined Arms and Services Staff School (CAS^3) to 4,500 in fiscal year 1986. The CAS^3 course allows all captains to receive quality training as staff officers in order to ensure that those filling the staff positions in combat units, combat support, and combat service support units are trained properly for such assignments.

In another effort to develop a highly qualified Officer Corps, the Army approved a pilot program to add a second year to the year-long Command and General Staff Officer (CGSO) course for selected students. The one-year Advanced Military Studies Program (AMSP) provides broad, in-depth, military education in the science and art of war at the tactical and operational levels.

Officers selected for AMSP will be those demonstrating the greatest potential for future command responsibilities at battalion and brigade level and for duty as principal staff officers of division and corps echelons. A need, as perceived by the Army's senior leadership, for innovative tacticians in the field and thorough planners at all echelons was the genesis for AMSP. Although the pilot AMSP involves thirteen students in combat arms MOS, plans eventually call for an annual enrollment of ninety-six students in specialty codes: 35, Military Intelligence; 41, Personnel Program Management; 54, Operations Plans Training and Force Development; and 92, Materiel and Services Management, by academic year 1986–87.

Training devices assumed increased importance as effective training support this year. Lieutenant General Fred K. Mahaffey, DCSOPS, DA, Chairman of the Standards in Training Commission (STRAC), announced that STRAC phase II, incorporating the use of electronic devices and combat mission simulators to enhance baseline strategies, would replace the STRAC phase I weapons training strategies based on live-fire of ammunition. The emerging family of electronic devices will provide realistic, challenging training, while conserving other, increasingly costly or scarce training resources, such as ammunition, fuel, repair parts, and time.

Training support also included the upgrading of phase I of the instrumentation system at the National Training Center to accommodate 500 players, instead of the previous 125. This year NTC began two leader training programs. The first provided an orientation for brigade and battalion command designees to visit the NTC for a period of four days, as part of their precommand training. These same commanders will subsequently bring their battalions to NTC for training exercises. The second course is for the division commander to train his staff at the NTC six months prior to a subordinate brigade's scheduled rotation.

During this fiscal year, the Army significantly expanded modernization training initiatives, centering their efforts on four major areas. First, the Training Directorate revised the army regulation governing Army Modernization Training (AMT). This document provides policy and guidance for New Equipment Training (NET), Displaced Equipment Training (DET), Doctrine and Tactics Training (DTT) and Sustainment Training (ST). Second, the Army sought to develop an automated and viable data base to consolidate all training information under one system and thereby provide AMT with a requisite management tool. Third, the modernization effort has placed significant emphasis on the Training Support Work Group (TSWG) process. The TSWG serves as an ad hoc forum to bring together the major

command representatives in the New Equipment and Doctrine and Tactics Training Arena in order to review the consolidated training plans, identify, and resolve deficiencies in the ongoing Army modernization program. Fourth, the Army initiated improvements in the training of the rapidly modernizing RC force by assigning RC roundout units the same priority as parent AC organizations for issuance of new equipment. This decision underlined the meaning of the Total Army concept and Army Modernization Training.

The Army Study Program

The FY 83 Army Study Program consisted of approximately 330 studies, about 53 percent continued efforts initiated earlier. For the first time, studies were categorized in terms of Total Army goals. The readiness and materiel goals accounted for almost 55 percent of the total studies, and received more than 40 percent of program resources. The future development goal represented less than 20 percent of all studies, but received more than one-third of the resources.

Continuing the trend of past years, Army agencies completed over two-thirds of the studies and about 15 percent were contracted out to private individuals or corporations. The remainder was accomplished through combinations of in-house and contractor efforts.

The continued maturation of the Army 86 studies proved to be the year's highlight as well as the analysis element at the California Institute of Technology's Jet Propulsion Laboratory, now officially known as the Arroyo Center. This organization, as it continues to grow in size and experience, will help meet a recognized Army need for forward-looking studies to support Army planning and programming for future change.

In his retirement address in June 1983, General Donn A. Starry, TRADOC Commander, stated that the Army's needs regarding training and schooling are the same today as they were ten years ago when TRADOC was instituted.

> The need for quality training, the importance of modernizing the force, an imperative for the right doctrine and tactics, the ever-present possibility of the need to mobilize—these all are very real, near-term concerns in our quest for an Army of excellence. I believe TRADOC has well served the purpose for which it was created; we must continue to address these and other missions as we prepare the Army to meet its potential wartime-mission responsibilities during the years ahead.

The Army's activities this fiscal year in the area of force development and training did much to address the needs identified by General Starry and to build an Army of Excellence.

4

Personnel

Since the end of the draft ten years ago, Army active strength stabilized at about 780,000, the authorized strength for FY 83. Throughout the year, the Army pursued management and strength policies, initiated in previous years, geared to recruiting quality youth into demanding career fields and retaining the best soldiers in the arduous combat arms and "high tech" skills. These policies enabled the Army to maintain improved standards for enlistment and reenlistment, assign reenlistment MOS objectives and reduce the loss rate of first-term soldiers from the combat arms. Ready availability of day-to-day strength information greatly enhanced the Army's personnel management capabilities and contributed to its achievement of a strength of 779,643 by the end of FY 83.

During the fiscal year, Active Army strength averaged 100.8 percent of authorization, with an average overmanning of 1,200 for the year. Active Army strength, as of 30 September 1983, is noted in *Table 1*.

TABLE 1—ACTIVE ARMY STRENGTH, 30 SEPTEMBER 1983

	Authorized Strength	Actual Strength
Officers	105,971	105,674
Enlisted Personnel	669,454	669,364
United States Military Academy	4,575	4,605
Total	780,000	779,643

Enlisted Personnel

In procuring personnel during FY 83, the Army emphasized the quality of its recruits, with the objective of achieving an Army of Excellence. The Deputy Chief of Staff for Personnel (DCSPER) further defined the Army's recruitment goals.

> The Army believes with absolute conviction that quality soldiers are the bedrock of a powerful Army. . . . We equate quality to mentally, physically, and morally competent young men and women who are capable of executing the tactics and doctrine of the airland battle with modernized equipment. It is no longer enough to recruit simply the appropriate numbers of young men and women. . . .

Accordingly, Army recruiters considered the full spectrum of a volunteer's capabilities through the individual's moral background, mental aptitude, and medical status, as ascertained via a new physical examination—the Military Entrance Physical Strength Capacity Test. The test determined actual physical strength to ensure that potential soldiers, whether male or female, were not placed in skill areas where requirements exceeded their individual capabilities. In gauging a volunteer's mental capacities, the Army used two key measures: possession of a high school diploma and test results achieved on the Armed Services Vocational Aptitude Battery (ASVAB).

Surveys by the Army Research Institute (ARI) showed that nearly three out of four male high school graduates, in contrast to about one in two nongraduates, stayed to the end of their enlistments; recruits who achieved higher scores on the Armed Forces Qualification Test ([AFQT] derived from the ASVAB) reached training proficiency more quickly, retained their skills more effectively, and contributed more to the overall cohesion of their units. Hence the Army looked for recruits with these attributes.

The search paid off in terms of the quality of enlistment personnel for FY 83 was the best recruiting year since the inception of the All-Volunteer Army. New enlistees with a high school diploma reached 88 percent, a two percent increase over the previous year. New recruits falling in the test categories I–IIIA's (the upper half) comprised 61.4 percent of all Nonprior Service (NPS) enlistments, an 8.4 percent improvement over the previous year, and test category IV's fell to 12 percent, a decrease of 7.2 percent.

The Active Army met its 1983 recruiting goals, accessioning a total of 145,337, 100.6 percent of its total programmed objective of 144,500. (See *Table 2.*) NPS accessions reached 132,731, 100.3 percent of the goal, while prior service (PS) accessions totaled 12,606, 104.2 percent of the goal.

Whereas general economic and social conditions played a significant part in the notable improvements in recruiting, a number of other factors also contributed including the Army College Fund (ultra-VEAP [Veterans Educational Assistance Program]), the Enlistment Bonus, and the two-year Enlistment Option programs. The Army made ultra-VEAP available on a nationwide basis in fiscal year 1982. Combined with the Enlistment Bonus program, the College Fund program enabled the Army to raise significantly the number of new enlistees with high school diplomas, who fell into test category I–IIIA, from 38,700 in 1981 to 67,900 in 1983, an increase of 75.5 percent. The Enlistment Bonus program is also credited with providing a sufficient

number of soldiers with at least the minimum capacity to perform in technologically sophisticated jobs. Together these programs enabled the combat arms to meet their fiscal year objectives in terms of the quality and quantity of recruits. Projected quality targets in communications, intelligence, and maintenance, however, were not met.

TABLE 2—1983 RECRUITING ACCOMPLISHMENTS,
Active Component

	Objective	Actual	Percent
Nonprior Service			
Males	116,000	116,215	100.2
Females	16,400	16,516	100.7
Prior Service			
Personnel	12,100	12,606	104.2
Total	144,500	145,337	100.6

Quality and quantity were stressed in reenlistments as well. To reenlist sufficient numbers of soldiers, while achieving and maintaining the right grade and skill balance, the Army continued an effective Selective Reenlistment Bonus (SRB) program. The abundance of personnel in the reenlistment pool permitted the Army to improve the quality of the force through increasing rigid reenlistment criteria. In revising reenlistment criteria the Army relied on the correlation among overall performance/potential, and ASVAB scores at the time of initial entry and the incidents of disciplinary actions. Specifically, the Army increased the AFQT requirement by approximately six percent for first-term individuals to ensure that those retained were capable of serving in the more technical Army of the future. The Army exempted soldiers who attained grade E–5 on their initial term of service from the AFQT requirements for they were mostly serving in a critically short skill or had already demonstrated outstanding performance and potential. Soldiers currently being punished administratively under the Uniform Code of Military Justice (UCMJ) were declared ineligible to reenlist. The field commander, however, had authority to waive this restriction. While some of these disciplinary actions were not critical in nature, they did relate to overall performance and future leadership potential.

During FY 83, the Army proposed new legislation concerning reenlistments. The Army wished to amend Titles 10 and 14, *United States Code* (USC), relating to periods of original enlistments and reenlistments in Regular components of the Armed

Forces, by authorizing the respective service secretaries the flexibility to determine the periods of enlistment and reenlistment. The Army's proposal would permit each service secretary to enlist or to reenlist persons in the Regular Component under his jurisdiction (not necessarily in whole year increments) for periods of at least two but not more than six years.

Previously Title 10, *United States Code*, Section 505 listed terms of enlistment and reenlistment in whole year increments from at least two but not more than six years. The new legislation complements the regimental system the Army desired to implement. Congress incorporated the proposal in the DOD Authorization Act for Fiscal Year 1984 (Public Law [PL] 98–94), which the President signed on 24 September 1983.

Successful reenlistment of high-quality soldiers depends on a strong retention effort, an adequate reenlistment bonus program, increased in-service educational and self-improvement opportunities, and other key factors such as a competitive total compensation package. Active Army reenlistment achievements for FY 83 are noted in *Table 3*.

TABLE 3—ACTIVE ARMY REENLISTMENT ACHIEVEMENTS, Fiscal Year 1983

FY 1983	Initial-Term	Mid-Term	Career	Total
Objective	31,400	30,300	23,100	84,800
Achieved	30,474	28,621	22,830	81,925
Percent Achieved	97.1	94.5	98.8	96.6

Since 1981 over-all forecasted three-year attrition rates have decreased significantly due largely to the improved quality of accessions. Within the education group AFQT categories relate to attrition. During the initial six months of enlistment, attrition rates for AFQT 1–111As tend to be lower than that of IIIBs or IVs. The cost comparison between AFQT categories I–IIIA high school diploma graduates and nongraduates over a three-year period shows that nongraduates become more expensive at about the eighteen months point of service because of their higher attrition rates. Attrition rates also indicate that the rate for males is lower than that for females because many of the female recruits were nonhigh school diploma graduates.

It is important for the Army not only to retain top performers but also to place them in skills the Army needs filled. A long-standing force alignment problem has been the MOS imbalance among combat arms Career Management Forces (CMFs), military intelligence, and communications specialties. To align the

force properly, the Army instituted in FY 83 Force Alignment Plan (FAP I), which continued a reclassification effort to reduce or eliminate CMF shortages and cut back the overstrength skills areas. The Army targeted just under 5,000 volunteers to transfer to shortage fields and planned to notify 15,000 soldiers in twelve overstrength career fields of the benefits of reclassification, both to the Army and to the soldier.

Through these efforts, the Army succeeded in placing many top performers in the critical skills, but increasing NCO requirements continued to produce personnel shortages. For example, the combat arms ranks E5 through E9 increased by 2,965, thus closing one gap between authorizations and NCOs on-hand. NCO requirements, however, grew by 2,896 slots, thereby producing a shortage of 2,075. In the critical skills area of Electronic/Warfare Intelligence, NCOs increased by 1,151, but a shortage of 1,053 personnel still existed because requirements increased by 764. In other skill areas, the Army was able to reduce shortages by 3,764. Nevertheless, the Army experienced an overall E5–E9 manning shortfall of about 5,400 personnel in FY 83, despite a 7,571 increase in the overall number of NCOs. By the end of FY 83, Active Army enlisted personnel reached 669,364.

Another way of keeping quality men in the needed skills was to control and track migration of soldiers from one specialty to another. To do this the Army used an automated system called The Skill Alignment Module, which ensured that specialty changes were based on priority needs of the Army. The Army contemplated expanding the system to include formal training in conjunction with job reclassification and control of additional skill identifiers. Timely adjustment of specialty imbalances by this automated system would enable the Army to meet force modernization needs and enhance stability.

To adjust for personnel shortages in FY 83, the Army converted 1,000 military positions to civilian positions, thus reducing "Borrowed Manpower" and enabling soldiers to concentrate on military duties. The Army planned to convert an additional 1,967 military positions in FY 84 and 1,707 positions in FY 85.

Officer Personnel

In FY 82, the Army officer program, like the enlisted program, again achieved notable success. During the year, officer strength of the Active Army increased from 103,463 to 105,674 fewer than 300 short of the authorized strength of 105,971. *Table 4* breaks down officer end strength by grade.

TABLE 4—ACTIVE ARMY OFFICER GRADE DISTRIBUTION
30 September 1983

Category	Total
Commissioned Officers	
General Officers	395
Colonel	4,723
Lieutenant Colonel	10,706
Major	16,464
Captain	34,321
First Lieutenant	12,667
Second Lieutenant	11,474
Total	90,750
Warrant Officers	
CW–4	1,554
CW–3	4,351
CW–2	5,817
CW–1	3,202
Total	14,924
Grand Total	105,674

Most of the increase occurred among career content officers (over four years of service), reflecting continuing improvement in retention.

In FY 83, the Army Chief of Staff approved the Total Army Officer Accession Plan (TAOAP), which included policies for accessioning officers for the Active Army, the Army National Guard, and the Army Reserve. The plan is to be prepared annually. The Active Army accessioned 10,567 officers out of 11,030 programmed for FY 83. Of the total accessions 5,286 came from the Reserve Officers' Training Corps (ROTC), 882 from the United States Military Academy, 859 from Officer Candidate School (OCS), 1,674 warrants, and 1,905 accessions from other sources. As indicated in *Table 5*, shortages occurred mainly in the Basic Branch, Medical Corps, Dental Corps, and Medical Specialty Corps.

To offset the shortages of pretrained personnel, which would certainly occur upon mobilization, the Army continued to implement the Retiree Preassignment and Recall Program begun in August 1981. The program aimed to provide mobilization manpower, facilitate the deployment of active personnel as retirees become job proficient, and contribute to the efficient operation of installations and activities during the early days of a mobilization. As of 30 September 1983, 126,000 retirees had been issued so-called "hip pocket" orders that directed them to report to specified installations throughout the country in the event of a mobilization.

TABLE 5—ACTIVE ARMY OFFICER ACCESSION

	FY 1982 (Total)	FY 1983 (Programmed)	FY 1983 (Total)
Basic Branch	5,772	7,204	6,957
Chaplin	114	112	112
JAGC	174	130	165
MC	544	504	463
DC	185	223	161
VC	57	64	47
ANC	453	451	476
AMSC	30	49	43
MSC	455	534	508
Total Commissioned	7,784	9,271	8,932
Warrant Officers	1,633	1,759	1,674
Total Officers	9,417	11,030	10,606

During FY 83 the Army made several changes in the Retiree Preassignment and Recall Program in order to increase retiree availability in the event of mobilization:

1. To facilitate the expansion of the training base and subsequent training of mobilization volunteers and inductees, the Army identified position as suitable for retiree to fill in Army Reserve training divisions and brigades.

2. Congress approved, as part of the DOD Authorization Act for Fiscal Year 1984, a provision to recall retired reservists on the same basis as Regular Army retirees. Both categories of retirees could be recalled during mobilization by the Secretary of the Army.

3. The policy which allowed recall only upon declaration of full mobilization, was changed to allow consideration of recalling retirees for a partial mobilization.

In FY 83 the Individual Mobilization Augmentees (IMAs) program continued to grow. At first participants of this program had been predominantly field grade and senior enlisted personnel in policy and planning positions. However, fiscal year 1983 saw an influx of more junior grade enlisted personnel who served in the operations positions. Army Regulation 140–145, which deals with the Individual Mobilization Augmentation Program, was published on 15 July 1983 and became effective one month later. As part of the program, the Army began testing the Battle-roster concept for IMA aviators at Fort Lewis, Washington. Each aviator was offered 26 to 60 days of training in 40 funded positions.

The Army plans to access nearly 10,500 officers in 1985 through ROTC, the program that produces most Army officers,

and one that continued to expand in FY 83. As indicated in *Table 6,* most categories of the program achieved remarkable progress. Total enrollment and enrollment in the advanced course increased by more than 1,000 students and scholarship applicants increased from 12,775 in FY 82 to 16,400 in FY 83.

TABLE 6—RESERVE OFFICERS' TRAINING CORPS ENROLLMENT
Fiscal Year 1983

	FY 1982	FY 1983
Total Enrollment	72,463	73,819
Production	7,079	8,093
Advance Course Enrollment	17,686	19,676
Scholarship Applicants	12,775	16,400
Scholarship Awarded	3,585	3,606
Scholarship in Force	7,535	8,500
Basic Camp		
Reported	4,055	4,601
Completed	3,583	4,150
Advanced Camp		
Reported	8,157	9,806
Completed	7,815	9,301

During FY 83 the academic discipline goals for officer accessions in 1985 were sent to the Professor of Military Science (PMS) at each institution as a specific mission based on the Army's needs and the school's ability to produce officer candidates with those disciplines. The plan allocated the following academic mixture: business, 30 percent; engineering, 20 percent; science, 20 percent; social science, 20 percent; and other, 10 percent. These academic discipline goals were an initial assessment by specialty code proponents and will undoubtedly change as the Army develops and refines its requirements.

ROTC scholarships have always been attractive to individuals with the academic skills needed by the Army. In FY 83, the Army allocated ROTC scholarships on the basis of future Army requirements in the following priority: engineering, 30 percent; science, 25 percent; business, 20 percent; social science, 10 percent; and 15 percent, other (includes humanities, law, medical, and nursing discipline). Engineering and science received greater shares of the scholarships as they represent ROTCs historically lowest production areas.

With the advent of the academic discipline mixture mission, during FY 83 the ROTC program improved not only qualitatively but also quantitatively in support of Total Army officer requirements. In addition, the Officer Selection Battery (OSB) was

finalized for implementation in FY 84. The OSB will provide a screening instrument to identify and eliminate individuals with low potential for successful service as United States Army officers. The Military Qualification Standards I (MQS–I) system also reached fruition during FY 83. The MQS–I rates military skills and professional knowledge of subject areas and provides a standardized program of training within the ROTC. Through the MQS–I testing, the Army identified potentially low-level academic achievement ROTC cadets during the year. To correct the situation, the Army initiated a plan to define problem areas and formulated policies to establish an acceptable level of reading, math, and English expression skills for all ROTC participants.

Despite success with accessions, the Army again experienced chronic shortages of field grade officers assigned to basic branches in the grades of major and lieutenant colonel. *Table 7* depicts the authorization for the officers, the demand on the inventory, which is the sum of authorizations, the transient, holdees, and student (THS) account, and the inventory at the end of FY 83.

TABLE 7—ARMY OFFICER AUTHORIZATION, FISCAL YEAR 1983

Grade	Authorization	Demand (Auth + THS)	Inventory	Delta (+ −)
COL	3,152	3,366	3,361	(−5)
LTC	8,845	9,379	8,185	(−1,194)
MAJ	13,666	15,055	11,948	(−3,107)
Total	25,663	27,800	23,494	(−4,306)

Although the Army, through upward grade substitution of company grade officers on-hand, narrowed the gap between aggregate demands and inventory, a shortage of 1,448 field grade officers remained at the end of FY 83.

Looking toward the future, the Army continued developing the officer objective force based on a 1989 officer personnel force of 108,894. Particular emphasis was given to officer objectives for the Basic Branch and such specialty branches as JAG (Judge Advocate General), Chaplain's Corps, and health-related fields.

After two years of experience under the current Defense Officer Personnel Management Act (DOPMA), the Army and other services determined that changes were necessary to provide better management for the Officer Corps and to eliminate unintended inequities created by the original law and the Technical Corrections Act. Hence, in fiscal year 1983, the services worked closely with the Office of the Secretary of Defense (OSD) to complete proposed draft legislation to amend DOPMA.

The services proposed legislation titled Omnibus Officer Personnel Amendments Acts of 1984 which contained several key elements. The legislation would increase the Army's maximum number of majors now that increased strength and better retention has occurred. It would award constructive credit to additional members of the Judge Advocate General's Corps, officers in the health professions, and certain officers who received a Regular appointment directly from civilian status. Promotion changes included new rules for defining the promotion zone, guidelines for determining the eligibility of officers scheduled for separation, greater authority for the service secretaries in promotion delay cases, and the creation of special selection board procedures for warrant officers. The services would also obtain more flexibility in the involuntary separation of Regular officers for cause and the appointment of Regular officers from the reserve components. The OSD forwarded the proposed legislation to the Office of Management and Budget (OMB) in December 1983. Congressional action on the package is expected in 1984.

Women in the Army

In FY 83, the number of women, unlike that of men, in the Active Army continued to grow slowly pending an Armywide review of policies and programs on the use of women in the Army. The review began in 1981, and the Army concluded it during this fiscal year.

The Army authorizes women to serve in 93 percent of all officer, warrant officer, and enlisted specialties. Consistent with the Combat Exclusion Policy of 1977, it does not assign women to battalion and smaller size units of infantry, armor, cannon field artillery, combat engineer, low-altitude air defense artillery, and certain helicopter units.

Concerns that the Combat Exclusion Policy failed to identify adequately all positions in the Army with the greatest probability of participation in direct combat and the need to match the Army's desire to balance combat readiness with individual opportunity for career advancement for all soldiers led to a comprehensive study of all policies and programs relating to women in the Army. This study was conducted by the Women in the Army Policy Review Group from May 1981 to November 1982.

On 12 November 1982, the Army released the study titled "Women in the Army Policy Review." The review provided a plan for determining the probability of participation of direct combat for every position in the Army (active and reserve components). The method for determining the likelihood of combat involvement was the Direct Combat Probability Coding (DCPC) system.

The DCPC system consists of seven codes, P1 through P7, with P1 representing the highest probability of engaging in direct combat and P7 the lowest. The Army applied one of these codes to each line of all 2,008 TOEs in the Army. When coding each position the Army considered four criteria—unit mission, MOS duties, doctrine, and location on the battlefield. For example, soldiers serving in P1 positions are required to be *routinely* located forward of the brigade rear boundary. Doctrinal proponents, who have responsibility for each TOE, provided the necessary data to HQDA, where the coding was actually applied.

The DCPC policy, which replaces the Combat Exclusion Policy of 1977, is a dynamic process requiring that position coding be updated at least once annually to accommodate the Army's needs. Current ratios of women in the Army present both opportunities and challenges not experienced before. An important task of the Army's leadership is to ensure that women serving in today's Army are provided maximum opportunity for personal and professional development and the attainment of their full potential.

During January 1983, the Army implemented the DCPC and closed positions with the highest probability of routine participation in direct combat (code P1) to women. It also distributed a list of units closed to women, including twenty-three additional MOSs, and forecasting a projected increase in women in the Army.

For several months, field implementation of DCPC created challenges for Army leadership, including inconsistencies in the application of DCPC. In certain cases, units and MOSs were being improperly closed; in others, women were being removed from units contrary to policy; and some women were forbidden to participate in training exercises. On 15 April 1983, DCSPER directed that the list of closed units be suspended and that a validation of DCPC coding be conducted.

Doctrinal proponents re-analyzed each position in the Army and presented the recoded data results at HQDA validation meetings. HQDA once again automated and analyzed the revalidated DCPC data and completed the analysis in September 1983. The Secretary of the Army approved the results one month later.

Meanwhile, the Army transmitted to the field detailed guidance pertaining to women effected by MOS openings and closings. Additionally, Department of the Army briefing teams visited installations worldwide to counsel individually the female soldiers in the affected MOSs. Detailed guidance will be forthcoming to the field concerning the career transition of women affected by closed units.

DCPC validation, however, reopened thirteen of the original twenty-three closed MOSs to women; closed one additional MOS

(MLRS/Lance/FDS [Field Driving Station]), and left officer specialties unaffected; it also replaced for assignment of women an additional 779 units in the Army, which were closed by the initial coding. Soldiers who took action to move from one of the thirteen MOSs formerly closed have been provided the opportunity to return to those MOSs, if they choose. If authorization and continuation rates stay the same, growth for the women in the Army (active and reserve components) could increase from the current strength of 139,000 to approximately 158,000 by 1987.

In summary, the DCPC policy recognizes the fluid and lethal nature of the modern battlefield. All soldiers could be exposed to some degree of combat throughout the entire theater of operations. Present Army policy restricts women only from positions on the battlefield forward of the brigade rear boundary, where the most frequent and violent combat would occur. Over the next several years, the gradual transition of women out of closed MOSs and units will help reduce personnel turbulence and will ensure that unit readiness is not adversely affected.

Despite the important changes brought about by the review of women's role in the Army, the number of female personnel serving in the Total Army actually increased from 144,000 in FY 82 to 170,485 this year. Most of the growth occurred in the Army Reserve and in the Individual Ready Reserve, which together contained nearly 73,000 female personnel, an increase of 29,000 over the previous year. The number of female personnel serving in the Army National Guard also grew slightly from 20,000 in FY 82 to 22,017 this year and in the active forces from 75,000 to 75,522. In the Active Army, female officer strength surpassed its projected goal of 9,300 by 190, though female enlisted strength fell short of the projected goal of 66,300 by 268.

Equal Opportunity and Military Representation

In FY 83 the Army continued to promote Equal Opportunity (EO) programs to assist commanders and managers to create a discrimination free environment, one that is conducive to accomplishing the Army's mission. The Army also took steps to facilitate the execution of these programs.

In December 1982 the Army established the Affirmative Action Officer (AAO) of the Civilian Personnel Directorate. The office is responsible for developing policies, plans, and procedures for implementing the Army's Affirmative Action program in accordance with the Equal Employment Opportunity Commission (EEOC) directives and guidance. The new office

incorporates affirmative action functions that had previously been the responsibility of several other office headquarters. The Army has made substantial progress in employing minorities, women, handicapped individuals, and disabled veterans. Minorities represented 22.4 percent of the Army's civilian workforce, women 40 percent, handicapped 7 percent, and disabled veterans 6.7 percent. Steady progress has been made at lower and mid-level grades, although at higher grade level much remains to be done. The Army representation, for example, at GS/GM 13–15 for minorities is 7.3 percent and for women is 6 percent. Program emphasis in the AAO will concentrate on increasing minority representation at the higher grade levels.

In order to give the Army noncommissioned officer leaders who will be influential, informed advocates for equal opportunity on the basis of their earlier training and experience, the Chief of Staff on 28 July 1983, approved a series of measures designed to bring about major changes in the way equal opportunity noncommissioned officers (EO NCOs) are selected and used. For example, the minimum rank for EO NCO was raised from Sergeant (E–5) to Sergeant First Class (E–7). Candidates are no longer (only) limited to volunteers (although the Army still encourages volunteers). Candidates for EO duty will, as before, undergo sixteen weeks of intensive training at the Defense Equal Opportunity Management Institute (DEOMI) at Patrick Air Force Base, Florida. As a result of these changes, the overall effort will attain a measure of legitimacy never before achieved.

In late 1982, responding to a need for training tailored for EO managers at the executive level, the Army DEOMI developed a short staff course to complement the regular course in order to train officers and senior NCO who are slated for assignments to corps (or equivalent) and higher levels. The result was a three-week course, inaugurated in the fall of 1983, offered as many as six times annually with ten students in each session. Not only does this expand DEOMI's overall student capacity, but also it provides, for the first time, a course focusing precisely and economically on the skills and knowledge required for EO management at higher levels.

Training EO managers reflects the ever increasing representation of minorities in the Active Army. As of 30 September 1983, minorities made up 36.2 percent of active duty personnel. Blacks, in particular, made up 8.9 percent of the commissioned officers, 6.0 percent of the warrant officers, and 31.3 percent of the enlisted force.

Table 8 shows the minority representation in the Active Army as of 30 September 1983.

TABLE 8—MINORITY REPRESENTATION—ACTIVE ARMY

	Officer	Warrant Officer	Enlisted	Total
White, not of Hispanic Origin	84.1	87.3	60.5	63.8
Black, not Hispanic Origin	8.9	6.0	31.3	28.2
Hispanic	1.2	1.4	4.3	3.9
American Indian/ Alaskan Native	0.2	0.3	0.3	0.3
Asian/Pacific Islander	0.9	0.6	1.5	1.4
Other/Unknown	4.7	4.4	2.1	2.4

NOTE: This is minority representation data only. Data may be different from racial data because white and black information excludes all Hispanics (some are black race).

Alcohol and Drug Abuse

Because alcohol and drug abuse impairs combat readiness it is a command problem. The Army maintains the Alcohol and Drug Abuse Prevention and Control Program (ADAPCP), which provides prevention, treatment, and rehabilitation services. The program helps eliminate drug pushers, identifies and treats abusers, and separates from the Army those who cannot be rehabilitated.

The program noticeably expanded in FY 83: 1,994 military and civilian personnel staffed 11 residential treatment facilities, 13 major command alcohol and drug control offices, 3 urine testing laboratories, 2 alcohol and drug educational centers, 192 community counseling centers and the DCSPER policy office and field operating agency (FOA). The number of soldiers enrolled in the program doubled from 25,030 in FY 81 to 51,858 in FY 83. A more stringent testing program and the inclusion of reserve component personnel on active duty for training tended to inflate the numbers. Those enrolled for alcohol abuse equalled 26,908, and those for drug abuse reached 24,945. Close to three-fourths of the offenders completed treatment and were returned to active duty.

In FY 83 the Army twice revised AR 600–85, governing the Alcohol and Drug Abuse Prevention and Control Program. The first revision, published on 11 February 1983, brought evidence obtained from mandatory urinalysis tests in disciplinary proceedings and for administrative actions into conformity with Military Rules of Evidence. The second revision, published on 28 June 1983, brought personnel administration and policy regarding alcohol and drug abusers in conformance with other regulations and Army policy in terms of retention criteria. In particular, the change established policy that second time offenders in grades E1 through E5 and first time offenders in grades E6 through E9 must be separated from the service.

Discipline, Law Enforcement, and Military Justice

The indiscipline indicators for FY 83 show a decrease in every crime rate in the Army. (See *Table 9.*) The rates per 1,000 for violent and property crimes have decreased for the third straight year, while absent without leave (AWOL) and desertion rates per 1,000 are the lowest they have been since the Army began recording AWOL data regularly in 1952. Drug offenses, which are broken down into two major categories: marijuana use/possession and all other drug offenses, also were down. The rate per 1,000 for marijuana use/possession has declined for the second straight year; the other drug offenses category decreased after having increased in fiscal year 1982. Better quality men and women entering the Army and command emphasis on crime prevention probably contributed to the lower rates.

The number of court-martial cases also decreased from 9,910 in FY 82 to 7,280 in FY 83. Court-martial statistics for FY 83 are noted in *Table 10.* Commanders imposed nonjudicial punishment under Article 15, UCMJ, in 132,045 cases compared to 140,191 cases in fiscal year 1982.

During FY 83 the Army made significant progress towards improving the Military Justice Regulation, the Manual for Courts-martial, and the UCMJ. Additionally, the Army completed a major study of the effectiveness of the military justice system under combat conditions.

A revised Army Regulation 27–10, *Military Justice,* became effective 1 November 1982. The revision changed the filing procedures for nonjudicial punishment records and provided for summarized proceedings under Article 15 of the UCMJ in certain cases of minor misconduct. Extensive work was also completed on the first change to AR 27–10 to implement the revised Manual for Courts-martial, 1984, the proposed Military Justice Act of 1983, and the Victim and Witness Protection Act of 1982 (PL 97–291). Chain-of-custody procedures were also developed and implemented in AR 600–85, *Alcohol and Drug Abuse Prevention and Control Program.* In addition, a draft comprehensive revision of the Manual for Courts-martial was completed. The draft reorganizes the manual to streamline procedure before, during, and after trial consistent with ensuring fair trial rights of the accused. The draft also brings certain provisions of the manual into conformity with existing case law and aligns, where appropriate, military justice practice with federal criminal practice. The draft was made available for public comment on 26 May 1983. The comment period closed on 2 September 1983 and

TABLE 9—INDISCIPLINE INDICATORS—WORLDWIDE

(rate per 1,000)

FY	QTR	Crimes of Violence	Crimes Against Property	Marijuana Use and Possession	Other Drug Offenses	Total Courts-Martial	Non-Judicial Punishment	Separations Other than Honorable	AWOL	Desertion
79	1	1.36	18.15	6.60	1.42	2.23	45.03	3.57	7.8	4.2
	2	1.44	17.66	7.23	1.49	2.47	49.16	4.28	10.3	4.2
	3	1.49	18.88	7.52	1.79	2.72	51.29	4.72	9.4	4.4
	4	1.61	19.66	6.62	1.71	2.47	47.54	3.97	10.5	5.2
		5.90	74.35	27.37	6.41	9.89	193.02	16.54	38.0	18.1
80	1	1.61	17.91	6.95	1.47	2.63	45.31	3.69	7.9	4.6
	2	1.56	18.18	6.95	1.45	2.96	48.56	4.52	10.9	4.8
	3	1.55	19.59	6.96	1.54	3.26	51.66	4.27	10.5	4.9
	4	1.74	21.43	5.59	1.16	3.10	51.34	4.21	12.3	5.3
		5.91	74.91	30.83	6.24	13.71	196.97	17.17	41.6	15.9
81	1	1.53	18.99	6.86	1.25	3.34	49.95	4.00	8.3	4.1
	2	1.51	18.15	8.04	1.46	3.48	50.52	4.21	9.8	3.8
	3	1.35	18.11	8.25	1.38	3.56	48.67	5.03	8.9	3.9
	4	1.52	19.66	7.68	1.15	3.33	477.82	3.93	9.0	4.1
		5.91	74.81	30.83	6.24	13.71	196.97	17.17	36.0	15.9

TABLE 9—INDISCIPLINE INDICATORS—WORLDWIDE—continued
(rate per 1,000)

FY	QTR	Crimes of Violence	Crimes Against Property	Marijuana Use and Possession	Other Drug Offenses	Total Courts-Martial	Non-Judicial Punishment	Separations Other than Honorable	AWOL	Desertion
82	1	1.41	16.53	7.07	1.11	3.36	43.67	4.07	5.8	2.9
	2	1.32	15.15	7.05	1.47	3.34	46.25	3.76	7.1	2.5
	3	1.26	16.55	6.65	1.49	3.07	44.23	4.53	7.5	2.7
	4	1.17	17.45	5.63	1.27	2.72	43.64	3.73	6.9	2.9
		6.16	65.68	26.40	5.20	12.49	177.79	16.09	27.3	11.0
83	1	1.12	15.95	5.16	1.09	2.52	39.24	1.74	4.9	1.9
	2	1.18	14.75	4.62	1.45	2.53	42.25	3.29	5.1	1.6
	3	1.09	15.64	4.10	1.30	2.33	42.84	2.63	4.7	1.7
	4	1.18	16.19	3.54	1.16	1.88	44.24	2.24	4.9	1.9
		4.57	62.53	17.42	5.00	9.26	168.57	11.90	19.6	7.1

TABLE 10—ARMY COURT-MARTIAL STATISTICS,
Fiscal Year 1983

	Convicted	Acquitted	Total
General	1,494	87	1,581
BCD/SPCM	2,000	75	2,075
Special	673	95	768
Summary	2,619	237	2,856
Total	6,786	494	7,280

review of these comments approached completion at the end of that month.

On 28 April 1983, the Senate passed S.974, the Military Justice Act of 1983 (a bill to amend the UCMJ and to improve the Military Justice System). S.974 is very similar to the 1982 proposed military justice legislation reported in the 1982 *Department of the Army Historical Summary* (DAHSUM). As of the end of FY 83, the House of Representatives had not yet acted on S.974, but passage was considered imminent.

The Army also completed a major study of the Military Justice System to ensure that the system functions fairly and efficiently in either high- or low-intensity armed conflict. The study identified opportunities where the Military Justice System could be made more effective in wartime, while preserving the fairness of the system. The study group published a package containing detailed legislative and regulatory proposals ready for implementation in the event of war.

In keeping with its strict enforcement strategy, the Army implemented new policies in July 1983 that mandate harsher sanctions for drunk-driving offenders and, as the new policies went into effect, increased law enforcement efforts on Army installations. A review of the most recent statistics indicates that both of these actions have dramatically reduced the number of soldiers killed in alcohol-related, privately owned vehicle accidents. For example, the number of soldiers killed in such mishaps during FY 83 was 92, a decline of 22 percent compared to the 118 recorded in FY 82. The Army anticipates further declines in traffic fatalities as the Administration, DOD, and HQDA enforce continued emphasis on dealing strictly with drunk-driving offenders.

The new Army policy on drunk drivers provides for the following sanctions against persons for drunk driving on post (for Active Army personnel, their dependents, and DOD civilians, sanctions apply whether offense was on or off post): Upon apprehension pending adjudication, persons suspected of drunk driving temporarily lose post driving privileges, are referred to the

ADAPCP for evaluation and undergo a commander's review to determine if the individual warrants either administrative reduction, bar to reenlistment, or administrative separation. For failure to take a blood alcohol test, the individual loses post driving privileges for one year and each officer, warrant officer, or enlisted member receives a general officer letter of reprimand. Upon conviction for drunk driving, the penalties are stiffer. They include a one-year revocation of license, mandatory enrollment in the ADAPCP and a general officer letter of reprimand for each officer, warrant officer, or enlisted member.

In keeping with its crackdown on offenders, on 9 March 1983, the Army approved for reactivation the Offense Reporting System as a Standard Army Multi-Command Management Information System within the Military Police Management Information Systems. The Offense Reporting System is intended to meet the requirements and objectives for crime statistics information to support crime prevention programs, law enforcement resource management, and installation/MACOM/Department of the Army management information needs. The Offense Reporting System will be fielded beginning in fiscal year 1984 to CONUS installations supported by the computer resources of Project Vertical Installation Automation Baseline.

In FY 83, the Army made two substantive changed regarding the Military Working Dog Program. To keep pace with changes and growth in the program, the Army revised for the first time in ten years AR 190–12, governing military working dogs. The changes replaced the Sentry Dog Program with the Patrol Dog Program and created several detector dogs for narcotics and explosives. The Army Veterinary Corps assumed proponency for military working dog veterinary services for all DOD components. A new Department of the Army Pamphlet 190–12 accompanied the revised regulation and provided a detailed "how to" establish, maintain, program, operate, train, and care for a Military Working Dog Program. Initial reactions to the regulation have been extremely favorable with widespread support.

In another change, the Army established a program whereby dogs and their handlers would be assigned and remain together as a team throughout the service career of either the handler or the dog. This team concept provides greater proficiency due to continued training and saves time previously lost in familiarizing the handler and his dog when a new team was formed.

The Army's crime prevention activities during FY 83 received special commendation at a conference of the International Society of Crime Prevention Practitioners held at Columbus, Ohio, from 18–21 November 1983. Crime prevention practitioners from

throughout the United States and Canada as well as representatives from both the public and private sectors and the four armed services attended the conference. In recognition of outstanding leadership and achievement in crime prevention (for a department serving a population of less than 5,000), the Fort Huachuca Provost Marshal's Office received the *Outstanding Crime Prevention Unit of the Year Award* and, in behalf of the society, the Department of the Army received the *President's Award of Merit.*

Civilian Personnel

The Army's civilian personnel play an important role in readiness and modernization, two key elements in an Army of Excellence. The Army continued to give its civilians high priority in FY 83. It emphasized strengthening the civilian workforce through improvements in civilian recruiting and staffing procedures, the evaluation and referral system, civilian training, and the grade structure and merit pay system among other activities.

Civilian personnel increases maintained the trend begun in FY 81 when, in order to replace borrowed military manpower and to improve near term readiness, Congress authorized increases in civilian personnel serving in military functions. By the end of FY 83, the number of Army civilians supporting military functions had risen to 332,236. By then, Army civilians (primarily in the Corps of Engineers) supporting civil functions totaled 32,440 and civilians in indirect hire numbered 58,624. Thus, by the end of FY 83, civilian personnel serving in the Department of the Army totaled 423,300 the largest number since 30 June 1976 and an increase of 19,000 over FY 81 and 12,000 over FY 82. The Army Chief of Staff has maintained that a strong peacetime civilian force is necessary not only to meet Army mission needs, but also to ensure that the Army is prepared for the first stages of a future war.

Consistent with the Army's traditional policy of helping family members of soldiers and of Army civilian employees (particularly in overseas commands) find employment as Army civilians, the Army developed the Family Members Employment Program in FY 83. Under this program, the Director of Civilian Personnel reviews hiring policies and issues changes to help family members gain or maintain suitable employment. One change allows family members to register for priority consideration for jobs when they relocate to accompany the military or civilian sponsor to a CONUS activity.

During FY 83 the Army developed another innovative staffing program—the Department of the Army Scientific and Engineering Cooperative Education Program, designed to help the

Army attract high quality candidates for engineering and scientific positions. The Department of the Army Scientific and Engineering program will provide work—study jobs for ROTC students. The program will begin testing in September 1984 and will cover ROTC Region 1, the east coast from Maine to Puerto Rico.

For several years, the cost of evaluating candidates for career program positions (83,000 professional, technical, and administrative positions) and the qualifications of referred candidates has been an issue in the Army. During FY 83 the Army tested a new evaluation and referral system—the Army Civilian Career Evaluation System (ACCES). After completion of the phase I evaluation of ACCES, the results are encouraging, and the Army plans to expand use of ACCES to other civilian career programs.

On 16 June 1983, the Army added the Ammunition Specialist Career Program to its civilian career management system. The program covers employees who manage, direct, control, perform or supervise work in ammunition operations and who were previously included in the Supply, Transportation, and the Materiel Maintenance Management programs. This new career program will provide a ready supply of highly qualified candidates for ammunition specialist positions and will provide career development and advancement for these individuals.

As in previous years, the requirements for Army interns (who serve as the chief replacement source for career program positions) were not met. The Army authorization of 3,065 central intern spaces did not fill the approximately 6,000 spaces needed. Until adequate spaces are provided, MACOMs and activities will continue to use local command resources to support the intern program. To fill intern vacancies, the Army obtained authority from the Office of Personnel Management (OPM) in March 1983 to appoint 600 Schedule B (mainly college graduates) outside hires to certain positions formerly covered by the Professional and Administrative Career Examination (PACE). The blanket authority allows appointment at the entry level (GS–5 and GS–7) in thirteen professional and administrative career (PAC) occupations. The Major Army Commands are expected to fill at least 50 percent of their PAC intern vacancies under this authority. The new PAC Outstanding Scholar Program permits agencies to hire college graduates directly who have a grade point average of 3.5 or higher on a 4.0 scale or who stand in the upper 10 percent of their graduating class without regard to a list of eligibles (except for consideration of displaced federal employees). While recruiting on college campuses, on-the-spot commitments can be made to top intern candidates. Although this hiring authority does not

confer career civilian service status, efforts are underway within DOD to obtain an Executive Order that will permit noncompetitive conversion at the GS–9 level for Schedule B appointees. As of 30 September 1983, 162 appointments or commitments have been made Armywide out of the 600 authorized. Most of these are in DARCOM and FORSCOM. Of the 162 appointments or commitments, 22 percent are black and 2 percent are Hispanic. MACOMs have been strongly urged to increase their use of the blanket authority for recruiting high quality external candidates including blacks and Hispanics to ensure full use of the authorization by the expiration date—March 1984.

In September 1983, the Army approved a plan to improve technical, managerial, and professional training for civilians. The plan, the Army Civilian Training Education and Development System (ACTEDS), covers intern through Senior Executive Service (SES) employees under each career program. The ACTEDS will have a plan prescribing training and developmental assignments for individual career programs as well as interdisciplinary positions (e.g., logistician, materiel acquisition management, project manager). Key ACTEDS elements include evaluating technical and managerial competencies, analyzing gaps in existing formal training, providing resources to fill these gaps, and selecting high potential employees at grades GS–12 and above for intensive training and development programs. In order to provide time for securing the necessary resources and for developing operational doctrine through a pilot test with DARCOM, the plan is scheduled for DA-wide implementation during fiscal year 1986 through 1990. When fully extended, ACTEDS will define essential preparation for career program and other managerial positions and will ensure that candidates have acquired the necessary managerial base as well as specific technical competencies and skills.

The Army labor relations program underwent two significant changes in FY 83. First, the Army initiated an Executive Order that provides for a partial suspension of labor relations' obligations in overseas areas. In the past, a number of decisions of the Federal Labor Relations Authority (FLRA) required the Army to negotiate with a United States citizen labor organization about commissary and post exchange (PX) ration limits and other matters covered by the United States and Republic of Korea Status of Forces Agreement. The Executive Order ensures that labor relations do not impair the implementation of treaties and agreements between the United States and host nations. Secondly, for the first time the Army began preparations to bargain on federal employee wages and benefits. The FLRA decided that the Army must negotiate with labor organizations on wages and fringe

benefits of employees of dependent school systems in the United States.

In FY 83 the Army developed the Commander's Award for Public Service in order to recognize private citizens who make substantial contributions to the accomplishment of the Army's mission. Comparable to the Commander's Award for Civilian Service, the award includes a certificate, bronze medal, lapel pin, and ribbon bar. The Army believes that this award will enhance the Army's image in local communities.

Since 1978, various congressional and Department of Defense actions have limited the number of Army civilian high grade (HG), GS–13 and above, positions. As of 30 September 1983, the Department of the Army's civilian HG strength (i.e., full-time employees in military functions) was 20,182, which placed the Army 192 positions below its end fiscal year 1983 target of 20,374 and represented a 6.83 percent growth above the Army's baseline during fiscal years 1982 and 1983.

The third year of implementation of the Merit Pay System was marked by a decrease in the amount of funds available for payment as incentives for high quality performance on the part of supervisors and managers in grades 13 and above. This decrease was due to the elimination of any comparability monies from the merit pay fund as a result of the delay of the annual adjustment to January 1984.

The fill rate (actual strength against authorized) of Army SES positions has lagged since its implementation in 1979 but has shown steady improvement. The fill rate was 68 percent in 1979, 71 percent in 1980, 80 percent in 1981, 91 percent in 1982, and 98 percent in 1983. The Army accomplished the marked improvement in SES fill during 1983 by identifying and prioritizing all new SES positions needed for FY 84 and FY 85 (61 positions) and authorizing recruitment and fill. To ensure a 100 percent fill rate, the practice of over-recruitment will be continued in FY 84.

In FY 83 the Army also improved the Civilian Force Management Plan (CFMP) by developing an automated capability to forecast civilian force structure, strength and personnel actions in coordination with the Office of the Assistant Secretary of the Army, Manpower and Reserve Affairs (OASA (MRA)) through a civilian module of FORECAST, an Army ADP (automatic data processing) system designed to support personnel management. The Army hopes to derive from CFMP the following benefits: improved work force planning methodology; integrated (civilian and military) forecasts of strength and personnel management data; predictions of work force characteristics and shortages; computer simulation of the effects of policy decisions; and management information required for future personnel policy

and program planning. It is expected that a core system modeling capability will be on hand by FY 86 and enhanced system capabilities by FY 87.

At the end of FY 83, Total Army Nonappropriated Fund Work Force strength reached 40,376, an increase of 7,251 employees over the FY 82 strength. Of the total, 5,354 represented foreign national employees in overseas areas; 7,010, military personnel employed in off-duty hours; and 28,012, United States citizens civilian employees. The work force comprises 52.9 percent women; 23 percent blacks, 5 percent Hispanics, 11.6 percent Asian, and .4 percent American Indians and Alaskan natives.

Placing unprecedented emphasis on civilian mobilization, the Army studied how well MACOM and activity civilian personnel offices plan for civilian mobilization and, with other defense components, tested the Tidewater, Virginia area during MOBEX 83. Major accomplishments included completely revising the governing regulations on civilian mobilization planning, identifying employees who may go on active duty, and distinguishing emergency essential personnel.

In summary, this fiscal year the Army achieved its goals of recruiting and retaining quality soldiers and civilian personnel on which the future of our Army of Excellence depends. The Army also laid the groundwork for innovative and exacting programs that should have a positive impact on the personnel system and the development of the new Army. Finally, the modernizing drive, particularly in the area of technological advances, is providing civilian personnel with the opportunity to contribute their talents to the growth of the new Army.

5

Support Services

Support services and benefits that are attractive and improve the quality of the soldier's life help to recruit and retain quality personnel, a prerequisite for an Army of Excellence. This fiscal year support services ranged from education to heraldic activities, with special emphasis on expansion of family oriented programs—always of great importance to soldiers. Knowing this, Lt. Gen. Robert M. Elton, Deputy Chief of Staff for Personnel, pledged his full support to Army families when he stated in October 1983: "If we are to achieve an Army of excellence, taking care of the Army family is not just a nice thing to do—it is an organizational imperative."

Quality of Life

To improve the living and working conditions for soldiers and their families, on 15 August 1983 the Army signed the Army Family White Paper. This document includes a clear statement of the philosophy behind the Family Program and states that a partnership exists between the Army and Army families to promote wellness and develop a sense of community. The White Paper provides for the development of the Army Family Action Plan to convert the philosophy into action. The insertion of this document into the *Congressional Record* of 6 October 1983 underscored its significance.

On 6 July 1983, the Army formed the Family Action Coordination Team (FACT) within the Human Resources Directorate (HRD), ODCSPER, to act as the Department of the Army staff proponent for the Family Program and more specifically to write, coordinate, and publish the Family Action Plan. The Family Program would replace single-issue policies which heretofore addressed each problem as a separate issue. In December 1983, the Army expected the FACT (comprised of action officers drawn from the various ODCSPER divisions) to become the Community and Family Policy Division, HRD, ODCSPER, and to retain its mission for the Family Program.

Between 25–27 July 1983, the Army conducted a family conference at Fort Belvoir, Virginia, with representatives of the Army staff, MACOMs, and outside agencies, such as the National

Military Wives' Association, the AUSA, and the Noncommissioned Officers' Association. Employing the draft of the Army Family White Paper, the conference provided a baseline upon which the FACT was able to build the Family Action Plan. Central to the plan are sixty-five issues of concern raised during former Army family symposia/conferences. Including additional research, information, evaluation, and criteria for future initiatives, the plan represents a road map to move the Army Family Program into the 1990s.

Chaplain Activities

The Army chaplain sees to the moral and spiritual development of the military community (the active soldier and his family and retired military personnel) and is responsible for the religious education and the pastoral care of the people he serves. Keeping in mind the welfare of the soldier, the chaplain conducts religious services, including those of worship, baptisms, funerals, religious missions, and retreats. In fiscal year 1983, the Army directed chaplain programs and activities either toward the service member and his or her family or toward the chaplains themselves to better enable them to conduct their duties.

This fiscal year, for example, the Army completed a Chief of Chaplains' study program, begun in fiscal year 1982, directed toward Korean spouses. The study, entitled "Pre- and Post-Marital Chaplains Ministry to Military Personnel and Korean Nationals", conducted by the Triton Corporation in Washington, D.C., resulted in an Office of the Chief of Chaplains (OCCH) Handbook on pre- and post-marital counseling procedures for chaplains that include recommendations about continuing programs for Korean spouses.

During February 1983, OCCH published its goals and objectives for fiscal year 1985–86 and submitted them to Army chaplains worldwide as a guide in preparing their own goals and intentions. The document included the following statement:

> The mission of the Army Chaplaincy is to serve the military community and provide for its religious and moral needs through the exercise of spiritual leadership and the nurture of individuals; to support the right of every soldier to the free exercise of his/her religion; to affirm the extrinsic worth of all soldiers; to develop a chaplaincy responsive to the future requirements of ministry; to insure the acquisition of material and management of resources; to support total chaplaincy goals, and to achieve a state of personal and organizational readiness for the strategic deployment world-wide.

Appendix A to the guide contained a copy of the OCCH goals and objectives for fiscal year 1985–86.

In April 1983, the Chief of Chaplains approved the development of the Chapel Activities Special Branch Insignia. A study group had been working on the feasibility of developing the insignia since October 1980. The Chief of Chaplain formally submitted the decision for approval and adoption in June 1983 to the DCSPER.

During the period 25–28 July 1983, the Command Chaplains held their 37th Annual Conference at the Rosslyn Westpark Hotel, Rosslyn, Virginia, to review and evaluate the past year's programs and policies with command staff chaplains, outline and discuss concepts and priorities for the future ministry programs, and develop short-, mid-, and long-range goals and objectives; to enable chaplains to perform a more dynamic ministry to Army soldiers and their families. The major issues discussed were supervision, civilian contracting, volunteer lay leaders, training, and Family Life centers. Participants included senior MACOM and Army and Corps chaplains worldwide, and guest speakers included Army Chief of Staff General John A. Wickham and Cardinal Terence Cooke of New York.

Between 24 and 30 April 1983, the Chief of Chaplains sponsored the 1983 Multi-Cultural Training Course at San Antonio, Texas. Eighty-nine chaplains attended the two-tracked course—thirty-nine in Track One and fifty-one in Track Two. Personnel from the Defense Language Institute (DLI), Monterey, California, conducted Track One, designed as an intensive language laboratory for battalion and brigade level chaplains who work with Hispanic soldiers. The course objectives were to enable the chaplains to participate in a limited way in a Spanish speaking service and to apply for the eight-week Spanish language course for chaplains. A keynote address, other speeches, and small group discussions composed Track Two designed for brigade, supervisory, division, installation, and MACOM chaplains. Here the objective was to familiarize chaplain participants with the Hispanic culture and to be able to identify areas of tension and conflict between blacks, Hispanics, Orientals, and whites as a result of the increased Hispanic population.

During fiscal year 1983, the Chief of Chaplains continued to express his high degree of interest in ensuring a feasible mobilization plan throughout the chaplaincy. Chaplain participation in LOGEX 83 and MOBEX 83 proved beneficial in identifying and resolving deficiencies in existing mobilization plans for chaplains.

Army chaplains took a number of initiatives in the area of religious education. They increased soldier/young adult, adult and youth short course materials dealing with basic Bible studies and topical themes. The U.S. Army Chaplain Board sought outside help to provide them with a resource tool to assist young

soldiers and youth in their relationships. The result was the board edition of *Friend to Friend* by J. David Stone and Larry Keefauver, which provides a nonprofessional approach to peer counseling. The Religious Education Strategy and Planning Group alerted the field to needs of the future. These will include nontraditional models of religious education. Religious education strategy will emphasize the chaplain team ministry concept, standardization of job descriptions of directors of religious education, identification of the common ground in a pluralist environment, all aspects of volunteerism, and the direction of future military religious education.

In the Catholic pastoral field, three significant events in the chaplaincy occurred. First, the Catholic bishops published their Pastoral Letter on Peace in May 1983. The letter addressed two aspects: conscience and individuals personal service and the broader strategic policy of the Army. Immediately the Chaplain Board evaluated the influence and significance of the Pastoral Letter for Catholic service members and their families, and chaplains relayed this information to field commanders. The second significant event was the impact of the new Code of Canon Law updating adult Catholic curricula in the Rite for Continuing Instruction of Adults (RCIA). The third event was the attempt to strengthen the fraternaties of Catholic chaplains through spiritual educational workshops, thereby improving career retention and encouraging an increase in priest recruitment.

Pay, Leave, and Travel

In the area of military pay, fiscal year 1983 focused on cost of living adjustments (COLA), retirement pay, benefits in divorce cases, a review of the military retirement system with its associated benefits, and the special and incentive pay system. Overall, however, 1983 was a year of pay retrenchment.

Changes occurred in the cost of living adjustment to retired military personnel. The Omnibus Budget Reconciliation Act of 1982 provided for limitations of nondisability retired pay cost of living adjustments for fiscal years 1983–85. Cost of living adjustments were to occur at thirteen month intervals—in May 1983, June 1984, and July 1985. Persons under sixty-two years of age were to receive half of the cost of living adjustment rather than the full adjustment, which would have matched projected consumer price index increases for those years. Further, for those retired military employed by the government, the Army offset (dollar for dollar) against their federal civilian pay their annual cost of living adjustments in retired military pay.

Military pay adjustments still lagged behind private sector wage growth. Although wage increases reached 9.5 percent or 8.1 percent depending upon which Bureau of Labor statistics factor one examined, the FY 83 military pay adjustment was limited to 4 percent in keeping with the president's program to control inflation. Service members accepted this short-term departure from the principle of pay comparability with private sector wage growth because of a Defense Resources Board agreement to seek complete parity for FY 84.

The 1983 defense authorization bill permits state courts to divide military retired pay in divorce cases provided that specific criteria are met. In many cases, the service finance centers make payments directly to the divorced spouse. Unremarried former spouses, who were married at least twenty years to a service member credited with at least twenty years of service, are also permitted continuing access to health care, post exchange, and commissary facilities. The law became effective on 1 February 1983.

On 1 October 1982 the Army formed the 5th Quadrennial Review of Military Compensation (QRMC), a DOD study group, to review the military retirement system, with its associated benefits, and the special and incentive pay system. The president, who is required to conduct a complete review of the compensation system for members of the uniformed services not less than once each four years, called for the review. The review staff consisted of a director, Maj. Gen. Stuart H. Sherman, Jr., U.S. Air Force, and sixteen military members drawn from all the services.

Recognizing the importance of the review, the Army formed a review cell, on 10 January 1983, within Soldier Policy Division (formerly Compensation and Entitlements Division), Human Resources Development Directorate, DCSPER, to monitor the activities of the 5th QRMC. Serving as the focal point for all matters pertaining to the study, the Army review cell received, reviewed, and analyzed all review taskings; called on the appropriate agencies for input; and prepared and coordinated comprehensive Army positions on each issue provided to the 5th QRMC.

During the review of the special and incentive pay system, the Army responded to data requests on forty-one types of pay. In addition, the Army submitted three reasonable initiatives to the 5th QRMC for their review. These were higher parachute pay rates for soldiers who perform at dangerous high-altitude, low-opening parachute jumps (HALO), additional compensation for individuals assigned the responsibility of performing duties as jumpmasters, and Hazardous Duty Incentive Pay for soldiers involved with the physical handling of chemical munitions.

To complete its review of the military retirement system, the 5th QRMC asked for three sets of force structure requirements by grade, years of service, and DOD occupational grouping. These were the actual force configuration on 30 September 1982; Objective Force (reduced to the fiscal year 1982 force size), which represented the best desired constant force profile that management could achieve under current financial constraints and manpower limitations; and Baseline Force (also reduced to the fiscal year 1982 force size), which represented the best desired constant force profile that management could achieve under current manpower limitations, but without financial constraints. For the enlisted force, the Army also submitted force structure requirements by mental category within skill level and DOD occupational grouping. As of 30 September 1983, the 5th QRMC was still conducting its review.

In the area of leave, funded emergency leave became effective 3 January 1983. Such leave authorizes space-available, round-trip transportation for service members and command sponsored family members on emergency leave from overseas locations to the United States, Alaska, Hawaii, Puerto Rico, or other U.S. territories. When government transportation is not available, passengers on emergency leave may use commercial transportation. Current policy allows family members to travel with the service members only when seats are available. This initiative also authorizes service members on a temporary duty assignment away from their permanent duty station to be paid round-trip transportation to the permanent station or other location.

As for travel, on 3 January 1983, the Army authorized household goods to be stored at government expense beyond 180 days, when orders direct TDY (temporary duty) in excess of 90 days or for an indefinite period. The previous law restricted all storage government expense to 180 days.

Housing and Homeowners Assistance

The Army made progress in several areas of housing and homeowners assistance, this year. These include reviewing housing policy to allow for greater flexibility; improving housing management; increasing construction, improvement, and repair programs; providing more and better housing for military families; and conducting economic analyses for housing alternatives. This fiscal year the Army's Housing Policy Team revised policies governing Unaccompanied Personnel Housing (UPH) and Housing Referral Services (HRS). The team changed the underlying philosophies of UPH policy by delegating more exception authority

to local commanders; amending eligibility priorities to take care of "paying customers" first (e.g., bonafide single soldiers and personnel on official TDY) and authorizing the use of nonappropriated funds to maintain, repair, and operate transient facilities when appropriated funds are not available. Similarly the Housing Policy Team consolidated two HRS regulations into one thereby clarifying and simplifying housing referral plans and procedures by removal of all Army imposed reporting and operating instructions and requirements.

As executive agent for all military services, the Army paid $1.1 million under the Homeowners Assistance Program to fifty-two applicants as a result of base closures and realignment actions. Mortgage assumptions on ten properties acquired during the year totaled $344,000 for the fiscal year. The family housing new construction program more than doubled this fiscal year, involving 229 housing units for two installations at a total cost of $21,270,000. The family housing improvement construction program consisted of the Line Item Improvement Program (LIIP) and the Energy Construction Investment Program (ECIP). The LIIP involved twenty-one projects totaling $54,721,000 while the ECIP comprised forty-two projects totaling $43,800,000. The Maintenance and Repair Program totaled $416,293,000, which included a $73,654,000 jobs bill supplemental.

During FY 83, the Army approved 5,220 unaccompanied personnel housing spaces for CONUS (4,957 for new construction and 263 for improvements) and 3,917 to overseas (3,882 for new construction and 35 for improvements). This fiscal year, the Army processed forty-one persons for duty assignments overseas as housing managers and forty-eight persons for assignment within CONUS. The Department of the Army Housing Management Career Program Screening Panel will convene in November 1983 and review the records of 279 housing management careerists.

By the end of FY 86, Congress will phase out the domestic family housing leasing program of 1,043 units. On the other hand, overseas leasing authority reached 18,850 units this fiscal year and continues to increase. The majority of these units are in European installations. The additional time gained by leasing precludes the eviction of service families from current leases.

The Army Family Housing fund changed from an OSD account to an Army appropriation, thus permitting the Army to exercise greater control of its family housing destiny. With more money available, the Army provided better housing for military families. Funding was up by 57 percent over fiscal year 1982. Due largely to an infusion of $74 million in fiscal year 1983

jobs bill funding, a backlog of maintenance and repair jobs declined from a peak $747 million to $646 million. New initiatives included upgrading substandard units, long-term renewal of an aging inventory, reducing high cost/uneconomical quarters, and introducing legislation for the provision of housing through the private sector. Improved management techniques included granting approval authority to field managers, bringing the Army family housing construction program cycle into synchronization with the successful military construction Army program cycle, and developing a multi-level computer system for the management of housing.

Progress continued on the development of the Housing Operations Management System (HOMES), a computer-aided management tool designed to assist Army housing personnel in the day-to-day management of all aspects of housing at installation, MACOM, and DA levels. Development involved several phases. Army housing personnel analyzed operating procedures and standardized data collecting procedures; developed a system which would maximize the use of the collected data and give managers much more flexibility in determining reporting needs and formats; developed a series of decision-algorithms and an economic analysis method, which managers could use to determine alternative ways of providing support as well as expected costs and benefits of each alternative. HOMES has become a fully interactive modular system that is user friendly, easily expandable, and useful for modeling future systems. The Army successfully tested the Assignments and Terminations (A and T) module at Fort Bragg, North Carolina, and used it to support daily housing functions since December 1982. The module records all application data, maintains waiting lists, monitors the status of all family housing, prepares both assignment and termination orders, produces all standard management reports, and provides a method for processing ad hoc inquiries. The Assistant Secretary of the Army for Installations, Logistics, and Financial Management (ASA (IL & FM)) approved the module for the extension on the VIABLE (Vertical Installation Automated Baseline) computer (automated data processing resource). The ASA also approved the early extension of VIABLE to Fort Shafter, Hawaii, to provide HOMES support for the assignments and terminations for all military services in Oahu including the Coast Guard. The ASA also approved testing the remaining modules for housing support. The Army has completed functional descriptions and economic analyses for six of the modules, and they are now ready for software development. Estimated cost savings for the A and T module of HOMES will be $13 to $16 million

over the next eight years based on the approved Milestone III Economic Analysis.

Several new initiatives involved housing economic analyses this year. The Assistant Chief of Engineers (ACE) Army Housing Management Division (AHMD) developed three courses of instruction for conducting economic analysis (EA) for housing alternatives. An economic and sensitivity analysis fulfills a requirement of the Congress and the OSD whenever the Army needs to acquire additional housing either through construction or lease. The ACE established EA for executives, managers, action officers. The Army conducts the courses worldwide to ensure that MACOM and installation housing managers can obtain the appropriate training. In addition, the ACE established the Housing Economic Analysis One-Stop program. This program provides USACE assistance to MACOMs and installations through its supporting divisions and districts to conduct these analyses. Pacific Ocean Division (POD) has been tentatively selected as the overall center of competence for the EA One-Stop Service program. The program will provide for computer capability at nineteen Office of the Chief of Engineers (OCE) One-Stop Service divisions and districts. Pending OCE authorization to field fully this computer capability, the AHMD has developed an emergency plan in which the Sacramento, Fort Worth, and Baltimore districts have been selected to process CONUS EAs as of 8 July 1983. The remaining CONUS One-Stop Service districts will be operational by June 1984. WESTCOM, U.S. Army, Japan (USARJ), and EUSA will use the services of POD, and USAREUR will use services of EUD. This computer capability will facilitate MACOM compliance with the HQDA required schedule for submission of EAs. In addition to the One-Stop Service program computer capability, the ACE will be implementing the automated program under the title "ECONPACK" in the Military Construction Programming, Administration, and Execution System (PAX). Any user that has a DD 1391 Processor terminal will be able to access the program.

Education

The Army took several steps during the year to further the Army Continuing Education System (ACES) by offering educational programs and services in support of training, readiness, leadership development, and personal achievement at 378 education centers and subcenters. The staff consisted of more than 1,300 Department of the Army civilians and included about 488 full-time educational counselors.

This fiscal year more than 300,000 of the total enlisted active duty force were potential students for the Army's Basic Skills Education program. The three-phase program provided remedial instruction in support of military training and soldier job performance. Overall there were more than 200,000 enrollments.

During the year the Army continued to redesign its Basic Skills Education program in order to develop a competency based, military related prototype of basic skills instruction for soldiers, which would also provide an opportunity for nonhigh school graduates to earn a diploma or certificate. Accordingly, as a follow-on to a TRADOC MOS baseline skills analysis (1981–1983), The Adjutant General's Office (TAGO) and the ARI began a curriculum-development project. Their objective is to develop a common, job-related Job Skills Education Program (JSEP) curriculum. The Army hopes to complete JSEP in fiscal year 1985 and begin Armywide implementation in FY 86.

A project to develop NCO participation in the ACES began this fiscal year. As incorporated into Army Training 1990, the project uses diagnostic testing and remedial or refresher instruction, if needed, for those scheduled to attend basic and primary level NCOES courses. The project aims to assist those NCOs whose basic skill deficiencies have an adverse effect on service school participation and attrition rates.

Currently between 10 to 20 percent of NCOs fail primary and basic levels of the NCOES due to academic deficiencies. For some MOSs, the attrition rate exceeds 41 percent, with math and reading skills the major problem areas. The Basic Skills Education Program and the Advanced Skills Education program are envisioned as the possible solutions for some of these problems. Several MACOMs have initial pilot remedial programs before course enrollment begins.

During FY 83, the Army Education Directorate participated in two JCS-sponsored mobilization exercises PROUD SABER and MOBEX 83, conducted in October–November 1982, and WINTER–CIMEX 83 in February 1983. The Army updated the education portion of the mobilization functions section of the TAG Regulation 10–5 draft and identified in the mobilization Tables of Distribution and Allowances (TDA) the seven positions to be retained in case of full mobilization.

Additionally, the Army identified and incorporated into its mobilization and operations planning system document the educational programs that it could expand during full mobilization. The Army emphasized that appropriated MACOMs will determine to what degree programs continue, are reduced in size and scope, or terminated.

Morale, Welfare, and Recreation

To advance morale, welfare, and recreation (MWR) programs and services for soldiers and their families, the Army emphasized overall improvement of program management, which would generate the money necessary to reduce the estimated $1.2 billion backlog in nonappropriated funds for MWR construction and elevate the quality of programs offered. Accordingly, the Army MWR Review Committee, comprised of senior major command and DA representatives and chaired by TAG, has endorsed major changes that will allow local commanders the flexibility and managerial latitude to direct programs in a manner similar to their civilian business counterparts.

Heretofore, the Army applied its share of dividends from Army and Air Force Exchange Service (AAFES) earnings primarily to operational expenses for MWR programs. Now the Army requires installation MWR managers to fund operations from locally generated income and appropriated funds, where authorized, reserving all monies from the exchange service for MWR major construction, which will enable full funding of a planned program to improve facilities. During fiscal year 1983, most installation MWR programs achieved self-sufficiency and were funding their own capital purchases and minor construction.

The financial results of the budgeting initiatives proved impressive. MACOMs far exceeded the challenge of self-sufficiency by generating $8.0 million in FY 83 profits before depreciation, $15.4 million greater than expected. Three years ago the Army Morale Welfare Recreation Fund (AMWRF) subsidized these same operating programs at $21.9 million. Locally generated income and reimbursements were $150.4 million, a 25 percent increase over FY 82. MACOM efforts clearly laid the foundation for achieving facility improvement goals. The Army redirected its FY 83 share in AAFES profits ($61 million) to capital improvement requirements.

To enhance nonappropriated cash management and maximize the efficient use of local resources, the Army approved for testing in fiscal year 1984 a concept to consolidate the funds of individual nonappropriated activities into one installation fund. So doing, the Army hopes to have cash on-hand for programs and for needed capital improvements. If the test satisfies Army, DOD, and congressional interests, the Army will approve for Armywide application the "one fund" approach to local cash management.

Other Army projects this fiscal year geared to fostering improved management of MWR programs included establishing an

installation business manager position to advance the application of sound management practices to the total MWR program; expanding on-site technical assistance for managers of revenue producing activities; issuing guidelines for pricing; developing a return on investment concept to aid in evaluating MWR construction; completing an MWR survey that will assist in market research; increasing the use of print media for professional development; and improving recruitment procedures for MWR positions.

In line with improvement in program management, in October 1982 the Army established the Morale, Welfare, and Recreation (MWR) Modernization Task Force as part of the MWR reorganization within TAGO. The task force was responsible for the development, analysis, and implementation of the MWR Modernization Program. It performed the conceptual, developmental, and evaluative work for the MWR program business manager, the National Armed Forces (NAF) managers' bonus incentive plan, and explored various modernization program options. It managed the development of the Installation MWR Fund (IMWRF) concept and initiated negotiations with OSD and Congress for a one-year test of the fund at TRADOC installations. Due to the similarity of functions, on 1 September 1983 TAG combined the Special Actions Office, responsible for studies warranting the personal attention of TAG as well as provision of analysis and consulting services to subordinate TAGO directorates, and the MWR Modernization Task Force to form the Program Analysis and Evaluation Office (PAEO).

In the area of community support this fiscal year, the Army focused its attention on the Family Advocacy program, the Exceptional Family Member (EFM) program, Child Development and Youth activities, a Fun, Food, and Fitness program, training soldiers in money management, and Army Community Service Volunteers. The Army took a number of initiatives to expand Family Advocacy program services this fiscal year. The *Army Family Advocacy Program Guidance,* published in the revised Army Regulation governing the Army Community Service (ACS) program, 15 June 1983, now requires installations to develop programs that address spouse abuse, child abuse, and neglect. Without additional spaces, installations used Family Advocacy funds to resort ingenuously to contracts to provide services to Army families in such areas as crisis intervention, hot lines, shelter, counseling, community awareness, parenting classes, short-term emergency child care, foster care, model projects, and professional and lay education.

The Army also automated the Central Registry located at Health Services Command (HSC) to monitor and track spouse

abuse, child abuse, and neglect. It provides monthly and semi-annual data to assist in resource and personnel management as well as program evaluation and development. Finally during May–August 1983, HQDA and HSC cosponsored three-day Family Advocacy training courses at six regional locations in CONUS. The trainers were outstanding, nationally recognized practitioners in the legal, law enforcement, medical, and counseling aspects of child and spouse abuse. The sessions were extremely successful with 523 MACOM and installation representatives in attendance. This was the first Army training to address the interacting needs of all the members on the installation staff (e.g., ACS Medical, Military Police, and Chaplains). The Army was able to undertake much of the above because of congressional increases in Family Advocacy funds from $1.5 million in FY 82 to $4.37 million for FY 84.

This year the ACS Division, TAGO, completed a number of initiatives to provide quality services to exceptional families. They developed a system for gathering and compiling data on the availability of special education and health-related services at all CONUS (to include Alaska and Hawaii assignment) locations; developed and conducted EFM training at regional medical centers; prepared two handbooks for publications and distributions in the next fiscal year, *Army Community Service (ACS) Staff Handbook for Assisting Parents with Exceptional Children* and *Exceptional Children: An Army Parent Handbook,* readied a Report of Special Education and Health-Related Services for EFMs (2 volumes), and revised the regulatory and procedural guidance for EFM.

The Army also contributes to soldiers and their families through child development services and youth activities (CDS/YA). This mission of the CDS/YA Division, under the Soldier/Family Assistance Directorate, is to establish policies, guidelines, and standards for programs involving children and youth of Army families. In FY 83, the Army expanded child development services (CDS) in a number of ways. For instance, it upgraded child care programs and facilities, including the construction of new facilities to replace inadequate structures; published Army Regulation 608–10, which reflects changes and expanded guidance in the areas of funding support, organizational structure, staff training, minimum standards regarding fire, health, safety, food and nutrition program management, developmental programming, and facility structural requirements; coordinated child care center design criteria for each service to follow and produced a design guide; revised the common Table of Allowance, which will provide a comprehensive listing of furniture, equipment, supplies, and materials authorized to implement CDS programs; undertook a number of CDS personnel

initiatives; developed a three-week pilot ACS/CDS management course and a prototype statement of work to provide guidance to installations preparing to conduct a comparative cost analysis to determine whether installation CDS should be performed by contract or by in-house DA personnel. In response to a DOD MWR child care subcommittee initiative, Caspar Weinberger, Secretary of Defense, designated April 1983 as the "Month of the Military Child." In a proclamation dated 22 February 1983, Secretary Weinberger recognized "the essential role that military child care services and youth activities play in fostering readiness and enhancing the quality of life of military families." He encouraged each service to develop promotional materials and plan events that emphasized the importance of providing quality service and activities that contribute to all aspects of children's development.

In the area of Youth Activities (YA) the Army shifted management responsibility for YA from Morale Support Activities to the Soldier/Family Assistance Directorate. This move separated YA from its traditional recreational base while it consolidated the management of programs for children under the directorship of one office. This move also initiated an assessment period to determine if the program continued to meet the needs of today's Army families. Specific youth-related needs and issues the Army is considering include sole parent families, families in which both parents work, and neighborhood problems related to adolescent adjustment, mobility, father absence, drug abuse, vandalism, and self concept.

Quality soldiers must be healthy and fit. This year the Club and Community Activities Management Directorate developed a Fun, Food, and Fitness program to provide MWR activities low calorie menus and promotional materials, which stressed diet as an integral part of the Army fitness program. The Army announced the program with a letter to the major commands and other agencies charged with executing quality life programs. Additional initiatives included articles in the *Army Host* magazine and a nutritional brochure.

Futhermore, the Army took a number of steps this fiscal year to help train soldiers in money management. They issued a newly revised Army Regulation that mandates personal financial training for all soldiers at their first permanent duty station. Also this year the Office of the Comptroller of the Army initiated a handbook on the soldier and money management aimed at reducing the increasing number of bad checks written by service members. The ACS of the Office of the Comptroller of the Army, Soldier Support Center, and Training and Doctrine Command have met to coordinate their efforts in money management

training. Finally, the Army is in the process of initiating a course guide for use by ACS Consumer Affairs professionals to conduct financial training. The Army's efforts in FY 83 should reduce the number of poor money managers, which are counterproductive to combat readiness.

This fiscal year the Congress passed legislation that legalized the use of volunteers for certain tasks by the military services. In December 1982, the Army assigned a full-time paid staff member from HQDA, ACS Division to address volunteer policy issues and established two new voluntary advisory positions. These positions are held by the wives of the Chief of Staff and Sergeant Major of the Army. Gifts and donations to the Army community were again generous this year. During the period 1 October 1982 through 30 September 1983, the Secretary of the Army accepted $1,358,784.60 in gifts to schools, medical centers, libraries, and museums.

In the area of morale support, the Army was extremely busy this year. Army activities focused on library activities and management, interservice sports, interservice chess tournaments, the Army band, the official Army song, the Armed Services YMCA (Young Men's Christian Association), the USO (United Service Organizations), hotel recreation, and morale support funds. The Army Morale Support Library program sustains the informational, educational, and recreational needs of today's soldiers and their family members. Ongoing projects this fiscal year included a centralized book acquisition program through which the Army purchased 177,470 volumes for 277 libraries, emphasizing selection of materials in the areas of physical fitness, computer science, consumer affairs, and family life. Moreover, the Army purchased 25,518 paperbound book kits and distributed them to military units and activities not having access to a library as well as troops participating in exercises in the Sinai, Honduras, El Salvador, and Grenada. Title selection reflected the increasing number of women readers in these remote units.

In another continuing project, forty-three morale support library systems are currently participating in the Federal Library Information Network (FLIN) for shared cataloging and interlibrary services through the Online Computer Library Center (OCLC), Inc. The Adjutant General's Office has continued funding fifteen systems, with the major commands or installations funding the remainder.

Test projects in library activities this fiscal year include a three-phase pilot project, sponsored by the Federal Library Committee, for centralized payment of interlibrary loan fees. The Army will expand the twenty-five Army libraries included in the first phase to fifty libraries in 1984 and to all Army libraries in 1985.

During FY 83, the Army Library Management Office (ALMO), which gives focus for Armywide library matters, established the Army Automated Library and Information Support System (AALISS). The AALISS provides coordination and support for the automation of Army libraries and reinforces the development of a cohesive Armywide program for sharing library resources and capabilities.

The ALMO also funded the development of self-paced library instruction modules for Army library technicians. The instruction modules consist of audiovisual cassette lectures accompanied by workbooks with study guides and training exercises. Finally, ALMO served as the proponent for DA Circular 370–82–1, Army Libraries Materials Acquisition Survey. The Army sent the survey to Army libraries worldwide in October 1982. The survey results will provide ALMO and command librarians current data to initiate new acquisition training materials for Army librarians and documentation to determine whether changes to existing Army regulations are necessary. The Army Library Committee established the Acquisition/Procurement Standing Committee, who developed the survey.

The U.S. Armed Forces have long recognized sports as an effective means for developing strength, ability, endurance, teamwork, self confidence, and the will to win. In FY 83, Army service members competed in nineteen men's and women's interservice sports competitions. Of those competitions, Army teams won three first places, eleven seconds, three thirds, and two fourths. Army team members selected to compete on Armed Forces teams also participated in nineteen national sports competitions. In Conseil International du Sport Militaire (CISM) competitions, Armed Forces teams, which included forty-three Army members, participated in eight events, placing first in five and second in one other. Seventy Army athletes participated in the National Sports Festival sponsored by the U.S. Olympic Committee in Colorado Springs, Colorado, 23 June through 3 July 1983. Sixteen Army personnel participated in the 1983 Pan Am Games held in Caracas, Venezuela, 14–29 August 1983.

Besides participating in sports activities this year, the Army entered the 24th Armed Forces Interservice Chess Tournament. The Army, Sea Services, and Air Force chess teams matched skills at the American Legion Hall of Flags between 20–28 September 1983. The Air Force won with 48 points, followed by Army, 33 and Sea Services, 26.

Through the years the Army band has always provided a morale boost to Army forces. This year the U.S. Army Recruiting Command (USAREC) produced bandperson recruiting adds, posters and a new publication titled "Start Your Music Career in

an Army Band." As USAREC gradually shifts its recruiting emphasis from high school to college students, the Army Bands Office supported four conventions selected by USAREC for their national convention schedule this year.

The Outdoor Recreation program also expanded Armywide during FY 83. Expenditures were approximately 30 million dollars, representing an annual growth of 25 percent. Total staffing approached 1,000 with 2 officers, 187 enlisted, 435 appropriated fund civilians, and 352 nonappropriated fund civilian personnel assigned. The Army published DA Pamphlet 28–14, Program Guide for Outdoor Recreation Personnel, in July 1983 and conducted a training workshop for USAREUR outdoor recreation personnel during April 1983 in West Berlin and for CONUS personnel during October 1983 at West Point. Air Force personnel participated in the latter workshop, which FORSCOM sponsored.

This fiscal year, the Armed Forces Professional Entertainment Overseas program involved ninety-three performing units, which toured military installations throughout the world for DOD or combined DOD/USO shows. These units gave approximately 3,000 performances for over 400,000 personnel in areas that ranged from the Pacific, Indian Ocean to Europe, Alaska to Lebanon, and Greenland to the Caribbean, including Honduras and Grenada.

As part of its morale support activities, the Army initiated a management study of the Armed Forces Recreation Center, Europe. On 30 September 1983, DA awarded a contract to Pannel Kerr Forster, a commercial firm with a wealth of experience in the recreation and hospitality industries, to conduct the study concentrating on the areas of management and operations in both hotels and outdoor recreation, the level of authorized appropriated fund support, effectiveness of management policies and operating procedures, adequacy of accounting structure for both hotel operations and recreational facilities, and overall Armed Forces Recreation Center (AFRC) efficiency.

This U.S. Army club system provides a morale boost to soldiers during peacetime. The system consists of officers' clubs, noncommissioned officers/enlisted clubs, and community clubs Armywide, and alcoholic beverage stores operated by installation club systems in the U.S. and Far East. During FY 83, the Army club system's total earnings decreased 18 percent to $21.5 million on revenues of $369.2 million.

Membership clubs had fiscal year 1983 total revenue of $278.2 million, up 1 percent from last year. Sales increased less than 1 percent from $197.2 million in fiscal year 1982 to $197.4 in fiscal year 1983. Net income was $17.1 million, which

amounted to a 23 percent decrease from the previous year. Major reasons for the decline were found in package beverage distribution to the club system and operating expenses that escalated faster than revenues. Army package beverage stores had total revenue of $161.7 million for the year, a 15 percent decrease from the previous year. Net income was $32.8 million, a decline of 30 percent. These figures include $126.5 million revenue and $21.8 million net income by club-operated package beverage stores and $35.2 million total revenue and $11.0 million net income by the USAREUR Class VI Agency.

During the summer of 1983, having determined that the club system contractually operated in the Sinai had become totally unsatisfactory in meeting the needs of soldiers of the Multinational Force and Observers (MFO), the Army terminated the contract and requested TAG to assume the operations of the club system in the Sinai for six months. Their prime task was to develop a system of MFO and international club annexes tailored to each unique requirement to include the combining of a series of unit lounges, a technically correct and workable system of controls including accounting, and a comprehensive food and beverage program.

In June 1983, the Army contracted with Bally Manufacturing company for the purchase of approximately 5,000 slot machines that they will install in Army clubs and Armed Forces Recreation Centers overseas, beginning in Germany, Italy, Korea, and Japan in October 1983. In the first full year of operation expected net income will be $25 million. The Army will use the income only for MWR capital improvement projects.

Clothing and Personal Equipment

The Army made significant strides in providing guidance concerning the management of clothing and equipment throughout FY 83. They renegotiated a Memorandum of Understanding (MOU) with the Air Force Exchange Service for the management of military clothing sale stores, and initiated a new regulation dealing with the life cycle of clothing and individual equipment. In addition, the Clothing Advisory Group, consisting of representatives of selected major commands and key staff agencies, met on three separate occasions; the Army Clothing Equipment Board (ACEB) held its first meeting to consider and approve such issues as the wearing of earrings by female personnel and the standard athletic ensemble. These and other actions have given new direction to the management of clothing and equipment for the Army and are expected to have a positive impact in the years to come.

On 9 July 1983, one month after the first ACEB met, the Army Chief of Staff approved the following ACEB recommendations for which the DCSPER has Army staff responsibility to retain earflaps in the BDU (Battle Dress Uniform) cap, to authorize female soldiers to wear earrings on an optional basis with all Army uniforms except those worn in the field, on utility or hospital duty, and in the food service. The earrings had to be small (not to exceed 6 m.m. or ¼ inch in diameter) unadorned spheres that screwed on or were the post-type, and they had to be made of gold, silver, or white pearl. They also had to fit snugly against the ear and be worn as a matched pair, with only one earring per earlobe.

Food Services

In the Food Service program this year, the Army directed its efforts toward improving the nutritional level of the Army diet and upgrading dining facility and combat feeding operations. To improve the Army diet, subsistence accountability and nutrition training teams visited seventy-two locations and trained 4,989 personnel during the year. The Army continued to develop the Food Management Information System, an automated system designed to improve management and control of dining facilities, which, when implemented, is expected to generate savings of over $11 million a year in reduced subsistence expenditures. Other food service improvements including modernizing three dining facilities, approving the construction of twelve more, and planning to build a food service training facility at Fort Lee, Virginia. Work also progressed on the development of a new combat field feeding system, which consists of a tactical kitchen with two major subsystems—the Mobile Kitchen Trailer and the Supplemental Field Kitchen Kit. When fully staffed both subsystems have the capability to heat and serve A, B, and T rations. The new T rations are fully prepared food items, capable of being stored safely on shelves, and packaged in half-size steam table containers that allow rapid heating and serving.

During fiscal year 1983, the Army initiatives to advance the development of combat food service systems and field rations through a series of tests. The Army tested field equipment and rations in Force Development Testing and Experimentation at Fort Hood, Texas, in Development Test I in Norway during the COLD WEATHER EXPRESS exercise, and during REFORGER and CABER TOSS exercises in Europe. The results were totally successful with T rations and equipment receiving high acceptance among the troops. The Army also completed field testing for the Marine Corps on the assault packet for feeding individual

fighting men for periods up to ten days without resupply, continued to develop the Arctic ration, and technical data packages in support of production testing of military foods. This year the Army completed the two-year test using simulated warehouse and controlled conditions to determine the risk of insects penetrating the new Meals, Ready-to-Eat (MRE) package and evaluated protective features of alternative packaging materials and design. Results indicated that there was no insect penetration and, therefore, an alternative container was not needed. The Army also completed engineering development of the Air Force New Harvest Eagle Food Service System and provided first procurement support for the system.

Commissary and Subsistence Supplies

During FY 83, the Congress, OSD, DA, and marketing organizations focused considerable attention on Army commissary operations, whose sales reached $1.6 billion. Assistance visits to the field and various training programs improved operations at all levels. As of 30 September 1983, the Army operated 71 domestic commissary stores and 8 annexes as well as 70 foreign stores and 30 annexes. During the year, the Army also constructed new commissaries at Fort Benjamin Harrison, Indiana; Fort Leavenworth, Kansas; and Kitzingen, Germany; renovated the commissary at Taegu, Korea, and opened a new annex at Hannam Village, Korea.

In compliance with a congressional mandate, Dr. Lawrence J. Korb, Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics), directed the commissary services to implement a new surcharge rate effective 1 April 1983. Accordingly, the Army increased the surcharge rate from 4 percent to 5 percent worldwide. Consolidation of the armed forces commissary systems remains a long-range objective.

In compliance with OMB Circular A–76, the Army completed the cost studies at Fort Leonard Wood (Missouri) and Yuma Proving Ground (Arizona) commissaries, and opted to operate the commissary at Yuma on contract, beginning on 1 December 1983, and compare its contract-run operations with that of the commissary at Fort Leonard Wood, which is run in-house. The Army plans to pause in FY 84 to review the progress of contract performance. Studies on fifty-seven other CONUS commissaries will be conducted in later years.

This fiscal year the Army developed a plan to reorganize the European Commissary Region (EURCOR) into seven districts. An interactive distributed data processing system will be in support of each district. The system uses commercial dial up

telecommunications daily from a district to a Regional Data Center. The Army expects to have the first district in Frankfurt, Germany, operating in February 1984.

Graves Registration

Actions to enhance the graves registration (GR) capabilities of the Army continued throughout FY 83. Particularly noteworthy were initiatives to increase GR specialist enlistment in the U.S. Army Reserve, a joint service agreement on a major revision to the GR field manual, and publication of a handbook on GR operations for the soldier who is not specifically trained in GR procedures. The Army believes that these actions, along with other initiatives undertaken this fiscal year, have materially contributed to its ability to implement an improved GR program prepared for any contingency.

Army Safety Program

There were many new initiatives in the Army Safety program during FY 83. These produced analyzing safety systems to investigate accidents, with special emphasis on helicopter and light aircraft mishaps. Based on the Army Safety Center's earlier identification of the problem of helicopter accidents involving loss of tail rotor effectiveness, the result of about one-half of all Army OH–58 aircraft accidents, this year HQDA directed that an Army Joint Working Group research the problem and recommend possible countermeasures. Also, in response to this problem, the Army initiated actions in flight test and engineering analyses at a number of Army agencies and within civilian industry. The Army Safety Center was instrumental in evaluating the plans for these actions and the results as an "honest broker" to ensure that the conclusions were well substantiated and formed the basis for effective corrective actions. Based on the working group's efforts, the Army identified countermeasures in helicopter design, operating procedures, and mission planning. In November 1983, the Vice Chief of Staff of the Army received a briefing on these countermeasures, which he is considering for Armywide application.

This year the Army Safety Center performed a System Safety Trade off Analysis for the family of light helicopter experimental aircraft (LHX) as part of the overall DARCOM Trade off Analysis regarding the conceptual design of various alternative configurations for this new aircraft. The Army Safety Center studied safety implications of such configurations as tilt rotor, advanced blade concept, and compound helicopter as well as the influences

of design details such as number of pilots, number of engines, and degree of crash worthiness. The basis for the analysis was the case files of aircraft accidents for Army OH–58, AH–1 and UH–1 and UH–60 helicopters. Analysis demonstrated the effectiveness of the Army aircraft accident data base for identification of the required information about the aircraft and will form the basis for more informed decisions regarding safety measures.

During fiscal year 1983, the Army Safety Center evaluated the safety programs at FORSCOM, the HSC, the National Guard Bureau (NGB), and the Corps of Engineers. They also conducted an aviation safety evaluation for the U.S. Army aviation units based in West Germany in conjunction with an evaluation by the Department of Evaluation and Standardization, U.S. Army Aviation Center. At the request of field commanders, the Army Safety Center conducted safety inspections at four Aviation/Army airfields this year, and students in the Aviation Safety Officer course taught by the Army Safety Center conducted Aviation Mishap Prevention Surveys at three installations.

This fiscal year the Army Safety Center investigated forty-seven major aircraft accidents under the DA Centralized Mishap Investigation (CMI) program. These investigations produced significant findings which had Armywide impact on the safety of aviation operations and served as the impetus for major improvements in operational and safety features of the Army aircraft fleet as well as improvements in operational and maintenance procedures and aviator and maintenance personnel training. Efforts continued to improve upon the standardization of the conduct of aircraft mishap investigations and technical report preparation. The Army has investigated 321 aircraft mishaps under the CMI program since its inception in April 1978.

As a result of several drowning accidents involving water operations, the Centralized Accident Investigation (CAI) team identified major system deficiency in the arena of Personal Flotation Devices (PFD). They discovered that the Army had accomplished very little standardization on the use and types of PFD. The Army is now actively correcting this deficiency in an effort to identify the proper use and type of PFD that will suit the Army's varied missions.

The CAI team's analysis of vehicle accident reports and several investigations reveal that driver's training and licensing procedures are very weak in instances involving driving as a secondary skill. The Army Safety Center, in conjunction with TRADOC, is strengthening licensing procedures and developing exportable driver training packets for specific mission and type of vehicle. In an effort to improve the safety awareness of ground vehicle operators, both the Tank Automotive Command

(TACOM) and USAC have initiated the establishment of emergency procedures in the operation's manual. Present operator manuals have not readily identified emergency procedures. This initiative will eventually provide standardized emergency operating procedures for each type of vehicle.

Since February 1983, the Army Safety Center has been developing a system safety assessment for each system under review by the Army Systems Acquisition Review Council (ASARC). They developed these assessments using data already generated by the combat and material development communities and forwarded to the Human Resources Development Directorate, DCSPER, HQDA, prior to the ASARC meeting. These staff papers ensure that system safety issues are properly addressed and form the basis for informed decision making by HQDA at these important milestone reviews.

During 1983, the Army Safety Center provided the chairmanship for the Joint Services Safety Conferences System Safety Panel. This panel is made up of representatives from each military service (including the Coast Guard), other federal agencies such as the National Aeronautics and Space Administration (NASA), and professional groups such as the System Safety Society and industry. The panel recommends approaches to strengthen DOD policy in the area of system safety and to facilitate the implementation of that policy by mutual exchange of ideas and information. During this year, the System Safety Panel successfully developed improved policy and guidance for the OSD regarding DOD acquisition and testing directives, developing and coordinating a substantially improved MIL-STD–882 (System Safety Program Requirements), developing and staffing military standard requirements for laser safety design and, initiating development of a DOD film for the system safety training of project managers and the senior decision makers.

Postal Service

This fiscal year the Military Postal Service Agency (MPSA) participated in several JCS exercises. Their continued participation in a JCS-warplanning exercise led to the development of detailed planning guidance for the postal service published in JCS Publication 15 and scheduled to appear in Change 2 of the DOD postal manual. MPSA is reviewing other service and joint publications to determine the applicability of those presentations to postal operations. On 1 January 1983, the U.S. Postal Service (USPS) agreed to process indemnity claims involving mail sent to or from Areal Post Offices (APOs) and Federal Post Offices (FPOs) in the same manner as domestic mail claims. Indemnity

claims processed through the domestic system average thirty days, whereas heretofore MPSA claims average ninety days. The new procedure significantly reduced the time involved in processing claims and ensured that MPSA patrons received the same standard of postal service (approximately thirty days) enjoyed by domestic patrons.

Transit Time Information System for military mail is the basis for developing mail delivery standards, monitoring actual performance, and identifying and resolving mail processing and transportation problems in a systematic, disciplined way. Using the system MPSA, together with the USPS, tested automatic machine sorting of letter class mail by zip code and depositing the mail into trays, which were then transported to post office for delivery. The test involved mail to and from CONUS to overseas locations to determine if transit times could be reduced. Test results suggested a reduced transit time of one to two days, to and from test locations, and also indicated a substantial reduction of mail processing time at military post offices and the USPS gateways. MPSA is taking steps to use the traying system worldwide as an on-line program.

During the year, ten Army and two Air Force IMAs performed their annual training with MPSA and worked on a number of MPSA initiatives. They prepared draft legislation to authorize postage-free mail for military personnel and their dependents overseas when such mail remains within the Military Postal Service, developed policies and procedures for implementing the proposed USPS official mail stamp, prepared a postal operations plan to be incorporated into the DOD postal manual, reviewed computer systems and management concepts for application within the MPSA, and reviewed operations at the Joint Military Postal Activities.

The Joint Military Postal Activity–Atlantic conducted an orientation and liaison trip to Honduras and Panama this year to evaluate the mail pipeline from CONUS to Honduras. The postal activities visited in Honduras were in the field and their dispersion resulted in a complex logistical system. The visitors noted that MPSA could improve several areas of mail support.

The Army also conducted a DOD test of INTELPOST—a concept that promises to bring personal mail delivery and dispatch into the 21st century through satellite communication—to determine its military application. The Command and Control Test Division (TCATA), U.S. Army, Fort Hood, Texas, and the USPS coordinated the test, which occurred during the REFORGER 83 military exercise in Europe. TCATA will report on the test in 1984. The Army agreed to pay for the use of the system at a cost

of $9.00 per page from Germany to the U.S. and $5.00 per page from U.S. to Germany during the test period.

Heraldic Activities

Heraldic activities focused on items of symbolic significance to the Army this year, including flags and distinctive unit insignia. The Institute of Heraldry assured Army units that heraldic items would be available upon a unit's activation under the Army Regimental System. To meet these demands the institute designed and developed sixty-seven distinctive unit and sixteen shoulder sleeve insignia. To save on cost and to broaden the procurement base, the institute continued its program of evaluating various materials and methods of manufacturing flags. The following statistics reflect, in part, the accomplishments of the institute this year: design of 668 items; completion of 1,120 paintings and drawings and 129 sculptures (molds, models, and casts); the development of 349 articles, some new and some modified, which the Army placed in the procurement system; and the inspection of 114,225 items under the optional quality control system, during visits to 42 posts and base exchanges. In addition, the institute performed 1,520 research and engineering support actions to assist the Defense Support Center.

The Army was successful this fiscal year in providing quality support services to the soldier and his family—services that boost morale during peacetime, while meeting physical, spiritual, and intellectual needs. The development of an Army Family Action Plan that will lead us into the 1990s was a singular achievement. The plan, however, is only a first step. Installations at lower levels must take initiatives similar to those undertaken at the DA level, and family action programming must have priority in major command budget requests. "To keep the quality of people the (Army) needs to maintain readiness," stated Lt. Gen. Robert Elton, DCSPER, in October 1983, "it must also emphasize the well-being of spouses and children." Other major programs the Army worked on this year to support the soldier and his family include quality of life efforts, community services work such as help for exceptional family members and family advocacy, the specifics of pay and allowances, and proposals to reduce out-of-pocket costs in connection with change-of-duty station travel. All have helped to retain quality soldiers and their families upon which the future of our Army of Excellence depends.

6

Reserve Forces

The Army National Guard (ARNG) and the U.S. Army Reserve (USAR), which are organized into units with wartime missions that are capable of mobilizing within a specified period of time, are essential elements of the Total Army and major deterrents to war. A joint statement by Secretary of the Army Marsh, and Army Chief of Staff General Wickham in May 1982, before Congress, sums up the Army's reserve components chief contributions to the Total Army.

> With the adoption of our Total Army policy in the early 1970s and increased global responsibilities, the contributions of the Army Reserve have become critical—possibly even decisive—because when mobilized (they) augment, reinforce, support and sustain the active force, as well as expand the training and logistics bases. They are a cost-effective means of fulfilling these essential functions, and they are also an important indicator of national resolve.

In FY 83, our reserve forces were full participants with the active force in the Total Army's modernization drive and its commitment to excellence.

Force Structure

To meet Total Army requirements for flexible and well-trained reserve forces, the ARNG modernized some elements of its force structure this year. The ARNG organized, under series TOEs, the 48th Infantry Brigade to enhance its performance as a roundout brigade, and the 2d Battalion of the 120th Infantry and 1st Battalion of the 263d Armor to align them properly with their active parent organizations. Consistent with modernization, the ARNG converted a military police group headquarters to a military police brigade headquarters in Michigan, a combat support hospital to a mobile Army surgical hospital in the District of Columbia, and another combat support hospital to an evacuation facility in Puerto Rico.

As a result of conferences with Kansas, Nebraska, Kentucky, Colorado, and Missouri, which will form the new 35th Infantry Division (Mechanized), the ARNG solidified the division's structure. Three existing separate brigades in Kansas, Nebraska, and Kentucky will form the nucleus of the new division, while the conversion of some existing nondivisional units and new activations in

the five cited states will provide additional structure. In late FY 84, the ARNG will activate the division at Fort Leavenworth, Kansas, where the division will also house its flag.

Other significant additions to the ARNG involved the organization of a Roland Battalion headquarters battery—the first in the Total Army—providing a base for an all-weather air defense and a headquarters, infantry battalion (mountaineer) and a TDA mountaineering school. The ARNG increased the existing MTOE (Modification Table of Organization and Equipment) infantry company (mountaineering) from level 3 enlisted to level 2; and will convert the TDA infantry battalion headquarters to a MTOE organization when the TOE for the mountain battalion comes out in April 1984. They also increased the Guam structure with the addition of a medical company (clearing), a signal company (wire and cable), and a combat support battalion headquarters (supply and service).

The management of ARNG force structure proved particularly challenging this fiscal year as a result of constraints imposed by the Army. Although the NGB was able to remain within the Army's force structure allowance while retaining all existing units that had not been programmed for conversion, constraints caused shortfalls in authorized spaces and hence in equipment for redistribution. In review of these shortfalls, the NGB requested from the Army flexibility in authorized spaces to cope with the problems of equipment distribution that recur each fiscal year.

Mobilization is one of the most significant concerns of the Army National Guard and Army Reserve. Because of reductions in the support elements in the Active Component in recent years, the Total Army relies on the guard and reserve to support the Rapid Deployment Joint Task Force and other contingencies with numerous early deploying forces. To support mobilization more effectively, the ARNG took a number of steps this year. It organized each of the fifty-four state and territorial headquarters organizations into State Area Commands (STARC), began the process of developing and documenting the mobilization STARC TDA, and began detailed planning for the reorganization of nine state-owned or -operated training sites, which are also mobilization stations, to provide organizational continuity in the transition from peacetime to mobilization. The Installation Support Units (ISU), as the sites are called, will perform a training mission in peacetime and upon mobilization to operate the mobilization station. ISU is programmed to receive funds over several fiscal years beginning in FY 85. The ARNG expects Army approval of the specific plans for each site before 31 March 1984. The nine sites are: Camp Atterbury, Indiana; Camp Robinson, Arkansas;

Gowen Field, Idaho; Camp Roberts, California; Camp Edwards, Massachusetts; Camp Blanding, Florida; Camp Shelby, Mississippi; Camp Grayling, Michigan; Camp Ripley, Minnesota.

Major units in the ARNG, as of 30 September 1983, are noted in *Table 11*.

TABLE 11—ARMY NATIONAL GUARD MAJOR UNITS
30 September 1983

Number of Units	Type of Unit
5	Infantry divisions
1	Infantry division (mechanized)
2	Armored divisions
10	Infantry brigades (separate)
8	Infantry brigades (mechanized, separate)
4	Armored brigades (separate)
4	Armored cavalry regiments
2	Special forces groups
1	Infantry group (arctic reconnaissance)
132	Separate combat and combat support battalion
18	Hospitals
760	Separate companies and detachments

The Army National Guard provides 33 percent of the combat divisions of the Total Army, 73 percent of separate brigades, 29 percent of Special Forces groups, 57 percent of infantry battalions*, 100 percent of infantry battalions (TLAT [Tow Light Antitank Battalion]), 41 percent of infantry battalions (MX)*, 100 percent of infantry groups (Scout), 43 percent of armored battalions*, 57 percent of armored cavalry regiments, 51 percent of field artillery battalions*, and 30 percent of aviation units. (*Includes organic and separate).

The USAR units, on the other hand, constitute 32 percent of the Army's tactical support, 26 percent of general support forces, and 15 percent of the Army's nondivisional combat and special theater forces. Reserve units would deploy 20 percent of their units within thirty days of mobilization, some moving directly from their reserve center to ports of embarkation in order to meet deployment schedules, 64 percent of units between thirty and sixty days after mobilization, and practically all units within ninety days.

During the past year the Army Reserve had 84 unit activations, 15 unit in activations, and 30 conversions. These actions were part of the TAA process, which identified units within the structure that had limited or no current mobilization missions. The Army Reserve had five additional unit activations in Europe—one Military Intelligence (MI) detachment, one replacement regulatory detachment, and three forward elements of CONUS-based USAR units. Although designated as

augmentation units, these three units, under the command of the Commander in Chief, U.S. Army Europe (CINCUSAREUR), perform peacetime mobilization planning and assist with post mobilization deployment of the CONUS-based units for which they are designated.

Strength and Personnel Management

During FY 83, the assigned strength of the ARNG remained above 410,000 for the first time since the build up years of FY 66 through FY 68. Fiscal year 1983 ended with an assigned strength of 417,178,99.7 percent of the authorized strength and a net gain of 8,553 over the previous year. The ARNG achieved 100 percent of the paid end strength objective of 417.019 and 99.7 percent of the assigned end strength of 418,966.

Minority strength, however, fluctuated throughout the fiscal year, with gains in officer strength and a decline in enlisted strength. By 30 September 1983, the overall minority strength of 107,099 consisted of 3,877 ARNG officers and 103,222 enlisted personnel, comprising 25.6 percent of assigned strength. Black officers accounted of 1,867, a continued increase over the past years, and black enlisted personnel numbered 66,903 for a total of 68,770 or 16.5 percent of assigned strength. This percentage reflects a steady decline throughout the fiscal year.

The number of female personnel in the ARNG also fluctuated throughout the fiscal year with gains in officer strength and a decline in enlisted strength. By the end of fiscal year, officers numbered 2,051 and enlisted personnel equaled 20,012 for a total of 22,063 or 5.3 percent of total assigned strength.

The officer programs have continued to contribute quantity and quality to the ARNG strength gains. Accessions have been increasing steadily and have now reached the programmed level, just under that authorized by the force structure. At the end of FY 83, ARNG officer strength reached 41,678 or 99.7 percent of the budgeted program of 41,800 and 97.5 percent of the 42,759 authorized by force structure. Although the recruiting and retention of medical specialties, particularly physicians, remains a concern, the fielding of the Army Medical Department (AMEDD) full-time recruiting force resulted in a significant increase in accessions during the fiscal year. Minority strength within the Officer Corps has risen to 9.3 percent and includes 181 field grade officers. Female officer strength has risen to 4.9 percent of the Officer Corps and includes 257 field grade officers.

The flow of officers from the ROTC has increased from approximately 10 percent in FY 79 to 34 percent in FY 83, and the ARNG has programmed ROTC accessions to increase to 40

percent of total accessions. The state Officer Candidate Schools, however, remain the primary source of career officers and best meet the particular needs of geographically dispersed units.

Enlistments for FY 83 totaled 89,103 or 100.1 percent of the programmed objective. The PS enlistments continued to exceed the programmed objective during the year, reaching 43,523 or 197.8 percent of the year's goal. The NPS enlistments, however, were below the objective for FY 83, for a total of 45,580 or 68.0 percent of the year's goal. Total gains in these two categories amounted to 51.2 percent NPS and 48.8 percent PS.

Due to the outstanding efforts of the ARNG recruiters bonuses, incentives, and accession of top quality enlistees has remained high. By mid-year, NPS accessions in low test score category (TSC) IV comprised only 4.2 percent of new enlistees, well below the ARNG allowance of 12.0 percent. As of 30 September 1983, only 6.0 percent of NPS accessions tested in TSC IV, a decline from the 11.8 percent for the previous year. Also by mid-year, ARNG enlistees with high school diplomas or high school senior enlistees reached 61.5 percent of accessions. This percentage, however, does not include the enlistment of individuals with General Education diplomas nor the junior and sophomore still in high school. By 30 September 1983, high school diploma graduates comprised 63.4 percent of total NPS enlistments.

Enlisted losses amounted to more than the programmed objective for the year, a reversal from the past five years. Total losses reached 81,933 or 101.5 percent of the objective. Also of continuing concern is the high rate of losses of people who had not completed their term of service (Non-Expiration of Term of Service or Non-ETS), which amounted to 63,098 or 108.8 percent of programmed objectives. This was partially offset, however, by the lower than expected loss rate of people who had completed their term of service (ETS). These losses equaled 18,835 or 83 percent of the objective. This meant a loss ratio of 77 percent Non-ETS to 23 percent ETS.

To support the FY 83 projected end strength of 417,019 with emphasis on quality enlistees, the ARNG implemented the following control measures effective 11 August through the end of the fiscal year. (1) NPS category IV male accessions must be high school diploma graduates or seniors; (2) NPS high school juniors, sophomores, and non–high school graduates must score in category III or above; (3) NPS female accessions must be high school diploma graduates or seniors, and score in category III or above; (4) PS (E6 or above) applicants may enlist only if a vacancy exists in MOS and grade.

As of 30 September 1983, the ARNG authorized overstrength in 723 units, with 344 units having overstrengths totaling 9,927.

Although 181 administrative units are not authorized overstrength, 104 of these units have an overstrength of 3,675. Since October 1981, consistent with congressional wishes, the ARNG has been making excellent progress in reducing the overstrength in these administrative units.

Several initiatives helped the ARNG recruitment program this year. The In-Service Recruiting (ISR) program continued its successful quality of PS referrals for ARNG. As a result, the ARNG experienced an 18 percent referral increase over the previous fiscal year. The ARNGs continued publishing of recruiting media material in the *Army Times, Stars and Stripes,* and *Men's Military Pacific and European Network* newspapers assisted the ISR referral mission. The addition of thirty-one Military Entrance Processing Station guidance counselors and fifty-one advertising sales promotion personnel during the year enhanced the full-time recruiting and retention force. Recruiter support also received help from portable display units, local television public service, and localization of nationally produced ads and media material. The ARNG film, "America at Its Best," selected for use in film events held abroad and nationally, proved an instant recruiting asset this year. Active recruiting efforts by the AMEDD recruiting personnel and advertising of the AMEDD programs had a beneficial effect in reducing the critical shortage of physicians and physician assistants that currently exist. Inclusion of minorities in ARNG Advertising Media at the national level, particularly for minority officer accessions, increased during the year. Promotion of opportunities for minority enlisted as well as officer accessions remains a high priority for the ARNG.

With regard to the ARNG retention program this year, it achieved 102.2 percent of its extension goals, with 73,272 ARNG soldier extensions. The first term extension rate equaled 59.6 percent, and the career rate reached 73.3 percent, for a total retention rate of 70.7 percent this year.

The Inactive National Guard (ING) has the authority to retain soldiers who leave units of the ARNG before fulfilling their contracted term of service and to attach these individuals to their parent unit for administrative accounting purposes, keeping them available for deployment with their unit in the event of mobilization. The strength of the ING as of 30 September 1983 reached 9,448—610 officers and 8,838 enlisted personnel.

As for the USAR it numbered more than 476,000 this year. Over 256,260 members of the Army Reserve were in the Selected Reserve. Approximately 248,300 persons served in the units or in active support of the Army Reserve and another 8,000 were IMAs. In addition, more than 219,800 men and women held

positions in the IRR, which amounted to less than half of the desired target strength this year.

The FY 83 end strength for the IRR, Standby Reserve, and Retirees are noted in *Table 12.*

TABLE 12—FISCAL YEAR 1983 ARMY RESERVE END STRENGTH

	Officer	Warrant Officer	Enlisted	Total
IRR*	49,847	4,890	206,041	260,778
Standby	190	16	55	261
Retired**	175,940	28,389	263,108	467,437
Total	225,977	33,295	469,204	728,476

*Includes Active duty for training (AT), and Individual Mobilization Augmentee (IMA) categories.
**Includes Retired Reserve and Regular Army Retirees

Equipment and Maintenance

This fiscal year the reserve forces probably enjoyed their most successful year in terms of equipment distribution in quite some time. The Army placed tremendous emphasis on providing new as well as displaced equipment to the guard and reserve as part of equipping the Total Army for combat readiness. For the first time, the USAR received new equipment such as the Black Hawk helicopter; the ARNG received M1 Abrams tanks and M2 Bradleys. All told the Army distributed over $460 million in equipment to the reserve forces in FY 83.

Congress continued its interest in preparing the reserve forces and directed the procurement of equipment totaling $15 million for the USAR and $50 million for the ARNG. The reserve forces used these funds to procure essential items for early deploying troops. Communication and electronic goods, avionics and support equipment are examples of some of the items bought for the Army Reserve. ARNG units received armored personnel carriers, 5-ton cargo trucks, division level telephone switching systems, and division and corps-level multichannel radios and telephone transmitters.

The reserve forces received some of the major items of new equipment concurrent with their Active Component counterparts. The 1st Battalion, 252d Armor, North Carolina ARNG, a roundout unit of the 2d Armored Division, received sixty-three M1 tanks and seven M3 Bradley Fighting Vehicles during FY 83. The USAR, on the other hand, received two Black Hawk helicopters, as an exception to the policy of equipping those who fight first, so that the reserve units could train for their wartime mission.

In July 1983, General Maxwell R. Thurman, the Vice Chief of Staff of the Army, directed the reserve forces to identify items of equipment that were not on-hand and considered essential for training. This program should benefit the training of the later deploying reserve forces in the use and maintenance of battlefield equipment.

Facilities and Construction

The Military Construction, Army Reserve (MCAR) program provides for the design and construction of a variety of facilities in support of the Army Reserve's training requirements and mobilization missions. Typical facilities include: USAR centers, organizational maintenance shops, equipment concentration sites, and weekend and annual training facilities. During FY 83, sixteen construction contracts were awarded for projects programmed at $28.5 million. Construction projects actually completed during the fiscal year and involving funds appropriated during prior years amounted to $45.8 million.

In addition to the MCAR program, the Congress appropriated Operation and Maintenance, Army Reserve funds to support the Real Property Maintenance Activities (RPMA) connected with the operation of reserve facilities. In this fiscal year $100.4 million was provided, an increase of $5.4 million over fiscal year 1982. The backlog of maintenance and repair requirements, however, grew from $71.2 million to $72.5 million during the year.

The ARNG Military Construction program received $55 million for new construction this fiscal year. Authorized construction included twenty-eight projects, totaling $27.1 million, and eleven other supply, training site, and administrative facility ventures totaling $9.3 million. This represented a decrease of $12.7 million from the FY 82 authorized program. During the year, the ARNG awarded twenty-eight of this year's authorized projects and nineteen of last year's carry over projects. The awards helped to stabilize the construction backlog at approximately $825 million, which reflects an inflationary increase over last year's level.

The ARNG operates 2,822 armories, 90 aviation facilities, 122 U.S. property and fiscal offices and warehouses, 1,075 logistical facilities, and 262 training sites. The federal government provides funds to operate and maintain these facilities with the exception of armories which state funds support. During FY 83, the U.S. government provided the states with $89.3 million to operate and maintain these nonarmory facilities, which represents a 19.2 percent increase from FY 82.

Training and Readiness

The provision of meaningful mobilization readiness training to all IRR personnel who required it became an Army goal this year. The FY 83 training capability plan identified 19,712 officers and 6,905 enlisted personnel who needed readiness training in the form of military schooling or Active Army counterpart training. Budget constraints, however, limited the IRR Training Plan to 6,482 officer IMA tours; 1,401 officer and 586 enlisted Special Active Duty for Training tours; and 11,731 officer and 5,271 enlisted counterpart/school training tours.

To improve the combat readiness of the IRR, the Army organized a Force Modernization and Training Requirements Division in January 1983 with the mission of developing future training requirements and training plans to keep pace with the modernizing Army. The division published its IRR Training Plan for FY 84 in June 1983. The plan will provide meaningful mobilization training for up to 9,500 officers and warrant officers and 7,300 enlisted personnel. Also, from 9 to 23 September 1983, the 70th Division (Tng) from Livonia, Michigan, conducted a pilot program to provide combat skill refresher training of junior enlisted (Private and Specialist–4) members of the IRR. One hundred and five infantry men at Camp Atterbury, Indiana, participated. The USAR training divisions will expand this program, which proved highly successful as a means to sustain individual proficiency, for approximately 500 infantry and armor soldiers in FY 84.

The ARNG also improved combat readiness and mobilization ability through enhanced planning and training efforts this year. During the year, ARNG units executed a total of 439 External Army Training and Evaluation Training programs. Two ARNG roundout units (that roundout active divisions) underwent force modernization, receiving new equipment, going through new equipment training and converting to the J–Series MTOE under the Division 86 design. For the first time, an ARNG unit participated with an Active Army division in the NTC rotation program, and this year 218 units (up from nine units in FY 76) performed with Active Army units in overseas training exercises, such as REFORGER and DISPLAY DETERMINATION 83, both in Europe.

Support to Civil Authorities

The Army National Guard continued to respond to emergencies throughout the United States and its territories and to assist

in the preservation and protection of life and property and the maintenance of order. In FY 83, guard personnel responded to 511 emergencies in 48 states and territories and played an active role in support of law enforcement drug control operations. The involvement of the National Guard in different types of missions reflects not only better training but also public acceptance of the guard as a professional emergency force to protect the well-being of our fellow citizens.

A total of 1,112 members of the Army National Guard were called into action in FY 83 to handle ten civil disturbances in ten states. These operations included prison disorders, truckers and mine workers' strikes, antinuclear demonstrations, state employee strikes and shooting incidents. The National Guard made plans and preparations this year to counter possible large scale antinuclear demonstrations against a U.S. Army installation.

Natural disasters and other unpredictable emergencies continued to dominate guard operations. Natural disasters accounted for 129 call ups: 63 floods; 22 snow and ice storms; 12 forest and range fires; and 22 tornados. The remaining 10 natural disasters resulted from volcanic eruptions, hurricanes, and an earthquake. The other 372 emergencies involved 127 medical evacuations, 71 search and rescue, 26 water hauls, 9 power outages, and 135 support missions. The total 511 emergencies in 48 states and territories involved 10,630 guard personnel and the use of 60,300 mandays.

Our reserve components made great progress this year by enhancing combat readiness and by becoming full partners in the total force. They did this through improved training, force structure and equipment modernization, more effective equipment distribution, closer ties with the Active Army, and assigned strength increases. The strength of the reserve components grew as a result of effective retention and successful recruiting, with the Army National Guard reaching within 1 percent of authorized levels. Due to the outstanding efforts of the retention force and to bonuses and incentives, accessions of top quality recruits remained high. Decreases in minority enlisted strength and the recruiting and retention of some specialties, however, remained a concern.

7

Organization and Management

Organization

To conduct its modernization program more efficiently, the Army made a number of organizational changes within its own structure in fiscal year 1983. The Office of the Chief of Engineers/Headquarters, U.S. Army Corps of Engineers underwent a realignment; and the Office of the Assistant Chief of Engineers (OACE), the Office of the Deputy Chief of Staff for Operations and Plans (ODCSOPS), the Office of the Assistant Chief of Staff for Intelligence (OACSI), and the Office of the Inspector General (IG) all experienced some reorganization. Other organizational developments included several base closures and realignments, a new manning system concept, and functional area assessments.

The realignment of the Office of the Chief of Engineers affected elements of both the Army staff (Office of the Chief of Engineers) and Major Army Commands (Headquarters, U.S. Army Corps of Engineers). (For simplicity sake the dual office is referred to as OCE). Through realignment, the Army hoped to strengthen the OCE's ability to provide services to its Army and Air Force clients, simplify some reporting and working relationships within the headquarters, emphasize the engineering and construction functions, and reduce the span of control at OCE executive office level.

The OCE implemented the realignment in two phases. Phase I took effect on 1 October 1982 and incorporated those features of the overall realignment plan that the Chief of Engineers could undertake. Phase II happened on 1 May 1983 and included the elements of the plan that required the support of the Assistant Secretary of the Army for Civil Works.

Specific actions taken as part of phase I included the disestablishment of OCE's Directorate of Military Programs and the transfer of its Army staff functions to the OACE (the installations planning, Army housing management, and military construction programming functions), and its MACOM responsibilities to a new Directorate of Engineering and Construction (the engineering and construction management functions). One additional change to the OACE, involved the creation of a new deputy

assistant chief of engineer position (for planning, programming, and congressional affairs), and the assignment of a senior SES civilian to the new position. (An 0–7 military deputy position for facilities and housing already existed).

Phase I also covered the incorporation of four small independent offices into the new Directorate of Engineering and Construction: the International Affairs Office, the Office of Contracting Policy, the Small and Disadvantaged Business Utilization Office, and the Safety and Occupational Health Office. (Within a few months after this occurred, however, the Chief of Engineers removed the first three of these offices from the directorate and allowed them to stand again as independent offices.) He also recast the Resource Management Office as the Directorate of Resource Management, incorporating the functions and staff of the Engineer Automation Management Office.

On 1 May 1983, the Assistant Secretary of the Army for Civil Works transferred the civil works, engineering (except hydraulics and hydrology), and construction functions from the Directorate of Civil Works to the Directorate of Engineering and Construction as part of phase II of the realignment. Thus, for the first time under this realignment one major directorate was responsible for OCE's engineering and construction management. The alignment parallels that in the field, where civil works and military functions are combined in engineering and construction elements of the divisions and districts. The Directorate of Civil Works still exists but with more narrowly defined functions, that include staff responsibility for the planning, programming, maintenance, and operation of civil works projects. This directorate also has the major responsibility for mobilization planning on behalf of OCE.

Two significant aspects of the reorganization of the OACE stand out. First, the OCE consolidated the Army staff duties in one office (ACE) and second, enhanced the integration of the facilities accounts (Military Construction, Facilities Engineering, and Army Family Housing) by placing them all under the control of the ACE. To promote the integration of the three facilities accounts, the OCE established an additional Office of Real Property Management Systems Integration and Planning, which included the provision for the consolidation of automation activities for the ACE. The reorganization resulted in very little physical personnel disruption because the Facilities Engineering Division and Family Housing Division remained in the Pulaski Building. Also, the OCE transferred the General Officer position (and the encumbent) from the previous Military Programs Directorate to OACE, thereby retaining a substantial element of continuity.

In mid-July 1983, ODCSOPS reorganized. The reorganization is designed to provide a more comprehensive approach to the management of force modernization programs by shifting emphasis from material systems to organizations, and by establishing a single point of focus on the DA staff for force modernization activities.

Under the new scheme, the DCSOPS Requirement Directorate (DAMO-RQ), the Force Management Directorate (CDAMO-FD) and the Army Force Modernization Coordination Office (AFMCO) have merged into a single Force Development Directorate (DAMO-FD). The former Director of Requirements has become the Director of Force Development, while the former Director of Force Management and the Deputy Director of Requirements have become Deputy Directors of Force Development. The new directorate now contains ten operations divisions.

To provide the policy guidance and direction necessary for comprehensive threat intelligence support to the Army, this year the ACSI created a new Foreign Intelligence and Threat Management Division within the Directorate of Foreign Intelligence. The reorganization took place chiefly to provide comprehensive staff supervision of intelligence production, ensure adequate threat support for force, combat, and materiel development, and provide centralized direction in the development of intelligence data bases and methodologies for producing long-range forecasts of enemy capabilities.

Also, the ACSI established a new position this year, that of Scientific Advisor, to assist with complex scientific and technological matters. Besides being the top Army intelligence consultant on scientific and technological matters, this senior civilian scientist is the evaluator and assessor of intelligence matters concerning foreign scientific and technological trends, developments, capabilities and discoveries, and he is the senior evaluator of the impact of technology on foreign military capabilities. He personally represents the ACSI on executive-level scientific committees.

Organizational changes occurred again this year in the Office of the Inspector General (IG). Inspector General Richard G. Trefry made changes during February and March 1983 to implement the compliance-systemic inspection methodology (a method of compiling data on complaints received by the worldwide IG system). Inspector General Trefry reduced the Operations and Evaluations Division, with the intention of ultimate elimination in FY 84; expanded the Inspections Division into the Inspections and Follow-up Division; created a Training Division, located at the Humphreys Engineer Center, Fort Belvoir, Virginia; converted the former Audit and Inspection Follow-up Division into

the Plans and Analysis Division; expanded the Information Management Analysis Division and redesignated it the Information Resource Management Division. The Technical Inspections, Investigations, and Assistance Divisions continued as before. The reorganization had little effect on strength, as it primarily involved the rearrangement of personnel duties. The fiscal year ended with the Department of the Army Inspector General (DAIG) and IGs in the field fully oriented toward the systemic inspection approach system that operates in a decentralized manner, but uses centralized information. Lt. Gen. Nathaniel R. Thompson who succeeded General Trefry on 1 September 1983 continued the programs begun by his predecessor.

During FY 83, the Army completed three base closure and realignment actions. A study, produced in July 1982, culminated in a decision on 16 December 1982 to retain Fort Sheridan, Illinois, as an Active Army installation. Also on 16 December 1982, Secretary of the Army Marsh announced that Fort Indiantown Gap, Pennsylvania, would become a subinstallation of Fort Meade, Maryland, as well as a semiactive installation. Four days later, HQDA directed Headquarters, FORSCOM to complete the realignment by 30 September 1983. FORSCOM accomplished this on schedule. As an adjunct to a realignment study to determine the desirability of relocating the U.S. Army Engineer Center and School from Fort Belvoir, Virginia, to Fort Leonard Wood, Missouri, the OACE prepared a detailed backfill investigation to determine the most effective utilization of the space that the Engineer School would vacate at Fort Belvoir, and that Headquarters, INSCOM elements would vacate at Fort Meade. Headquarters, TRADOC received this study in August 1983 for incorporation into its realignment study records.

A major organizational development this year was the implementation of the New Manning System, which is comprised of the COHORT (Cohesion, Operational Readiness, and Training) Unit Movement System and the Army Regimental System. The New Manning System would build loyalty, cohesion, and morale and thus aid in the development of quality units. This year the Army formed 25 additional company-sized COHORT units, bringing the total to 52 and deployed 10 of them overseas (8 to Europe and 2 to Korea). Since the results of field evaluation and other analysis indicated that a company level replacement system became unsustainable in the long-tour areas, the Army initiated plans to begin a battalion level COHORT system.

Within the Army Regimental System, this year the Army approved the formation of sixty-four combat arms regiments and implemented the first seven. The Army also agreed to the concept of the Honorary Colonel of the Regiment, in which each

regiment appoints a former distinguished member of the regiment to perform ceremonial duties. Two of the seven implemented regiments appointed Honorary Colonels. In addition, the Army consented to and implemented the concept for affiliating active duty general officers with regiments. Officers at the Army Military Personnel Center (MILPERCEN) operated throughout the year as Regimental Adjutants for the seven implemented regiments and played an active role in the career management of regimental soldiers. Finally this fiscal year, the Army approved the New Manning System concept for the combat support and combat service support forces and initiated plans to apply the Regimental System to each branch.

In July 1983, the Army decided to conduct broad-based assessments of the Army's branches to ensure the success of force integration modernization program and to integrate analysis efforts of the Army staff and staffs of the major commands. The assessments would focus on key organizations, with their related personnel and materiel in a branch undergoing change, during the fiscal year 1983, 1984, and 1985. To identify strengths and weaknesses, the assessment of each unit would include an analysis of doctrine, organizational design, force structure, documentation, training, manning, equipping, sustaining, and facilities. The Army conducted its first assessment, a review of field artillery, on 30 September 1983.

Financial Management

The Army's FY 83 budget request included in the President's budget amounted to $60,740.6 million. Congressional action amended this figure so that the grand total appropriated to the Army in the FY 83 equaled $57,496.2 million. The table below shows major milestones leading up to the FY 83 Army appropriations bill. *Table 13* presents in greater detail the budget story and the Army's expenditures for this fiscal year.

The Army's overall obligation performance for FY 83 was within an acceptable range. Planned obligations for the year equaled $75,694 million, actual obligations incurred were $73,476 million. The variance of $2,218 million can be attributed to the use of procurement funds as bill payers for reprogramming actions, savings on low bids in the construction appropriations, and lack of sales from the stock fund.

Outlay performance was very good. Planned outlays for FY 83 incurred under authorized obligations were $52,187 million, while actual performance was $51,802 million. The small variance of $681 million was due primarily to the obligation shortfalls.

TABLE 13—FISCAL YEAR 1983 APPROPRIATIONS BILL (TOA) ($ IN MILLIONS)

Following is an Audit Trail of FY 83 Army Budget thru Congressional Action to Public Law Finalization

	Basic Request					Supplemental		
Appropriation	President's Budget Request	Amended Budget Request	House Action	Senate Action	Public Law	Supplemental Request	Public Law	Grand Total Appropriated
MPA	14,401.1	15,363.7	14,478.1	14,023.8	14,454.8			14,454.8
RPA	1,224.8	1,302.0	1,247.5	1,224.8	1,247.3			1,247.3
NGPA	1,680.5	1,792.5	1,695.2	1,669.2	1,698.8			1,698.8
OMA	16,827.6	17,086.1	15,754.8	15,931.7	15,847.4	6.2	6.2	15,853.6
OMAR	686.4	699.2	707.8	692.2	705.6			705.6
OMARNG	1,123.9	1,152.3	1,179.6	1,157.8	1,195.1			1,195.1
NGPRP	.9	.9	.9	.9	.9			.9
Aircraft Procurement	2,745.9	2,745.9	2,497.4	2,444.5	2,489.1[c]			2,489.1
Missile Procurement	2,846.6	2,846.6	2,267.2	2,611.6	2,266.6[c]	478.6	453.6	2,720.2
PWTCV	5,030.7	5,024.5	4,649.9	4,591.9	4,713.0[c]			4,713.0
AMEO	2,638.9	2,625.7	2,074.0	2,129.3	2,121.0			2,121.0
OPA	4,567.5	4,625.8	4,141.3	4,207.9	4,115.9	5.0	5.0	4,120.0
ANC/AR EQPT	—		—	200.0	—			—
RDT&E	4,484.0	4,533.8	3,853.1	3,851.0	3,879.7			3,879.7
Army Stock Fund	225.1	221.1	221.1	221.1	221.1			221.1
Army Conven. Ammo Stk Fd	1.0	1.0	0	0	0			0
DOD APPROPRIATION REQUEST	58,484.9	60,021.1[a]	54,767.9[b]	54,957.7	54,956.3[c]	489.9	464.8	55,420.2

TABLE 13—FISCAL YEAR 1983 APPROPRIATIONS BILL (TOA) ($ IN MILLIONS)—continued

Following is an Audit Trail of FY 83 Army Budget thru Congressional Action to Public Law Finalization

Appropriation	Basic Request					Supplemental		
	President's Budget Request	Amended Budget Request	House Action	Senate Action	Public Law	Supplemental Request	Public Law	Grand Total Appropriated
MILITARY CONTR. PROGRAMS								
MCA	1,100.2	1,100.2	982.8	982.8	929.7			929.7
MCAR	42.8	42.8	42.8	42.8	41.8			41.8
MCARNG	51.1	51.1	55.0	51.1	55.0			55.0
FH, Army	1,061.6	1,061.6	1,024.3	964.9	974.9	0	73.7	1,048.6
MILCON APPROP'N REQUEST	2,255.7	2,255.7	2,104.9	2,041.6	2,001.4	0	73.7	2,075.1
GRAND TOTALS	60,740.6	62,276.8	56,872.8	56,999.3	56,957.7	489.8	538.5	57,495.3

NOTES:

[a] This number includes an 8% pay raise plus the November (82) budget amendment.

[b] This number includes a 4% pay raise plus a 25% pay absorption.

[c] This number includes reductions for Independent R&D and Bid Proposals. Army's share is $80.7M:

Procurement A/C	−$20.9M
Missile Proc	−21.6M
WTCV Proc	−38.2M
Total	−80.7M

Table 14 is expressed in terms of this year's authorized obligations, while the Army's actual expenditures include obligations incurred in previous fiscal years.

TABLE 14—ACTUAL OBLIGATIONS AND OUTLAYS,
30 September 1983
($ in millions)

	Obligations			Outlays		
	Plan	Actual	Variance	Plan	Actual	Variance
Mil Pay	17,687	17,665	−22	17,458	17,439	−19
Opns	19,717	20,188	471	17,492	17,292	−200
Proc	17,034	15,500	−1,534	11,762	11,443	−319
RDTE	4,660	4,640	−20	3,666	3,658	−8
Constr	1,995	1,835	−160	1,016	954	−62
AFH	1,040	989	−51	941	874	−67
Funds/Accounts	13,561	12,659	−902	−148	−142	6
Total	75,694	73,476	−2218	52,483	51,802	−681

During the year the Army worked on the FY 84 budget, which became a part of the FY 84 defense authorization bill, signed by the president into law on 24 September 1983. The Army expects the president to sign the FY 84 military construction authorization bill, the military construction appropriations bill into law during October 1983, and the FY 84 defense appropriations bill into law in December 1983.

The Economies, Efficiencies, and Management Improvement (EEMI) program is the Army's effort in support of the president's plan to eliminate waste throughout the federal government. This fiscal year the Army began to incorporate EEMI concepts into the Planning, Programming, Budget, and Execution System (PPBES) cycle, and for the first time, included an Armywide call for savings data in the Command Operating Budget. This effort identified past and future cost avoidance and budget savings of $8.3 billion. In order to better track savings and avoidance of future costs in program and budget documents, the Army will continue to cross-reference savings in budget justification books.

By the end of the fiscal year, the Army was incorporating EEMI concepts into the Industrial Modernization Incentives Program (IMIP) efforts that were ongoing with nine different defense contractors, two of whom were undertaken jointly with other services. Although the resources for this new initiative are limited, the expected benefits of eliminating waste are large. By citing the Army's program as the best of the three services, Assistant Secretary of Defense (Comptroller) acknowledged the extent of the Army's success in EEMI this fiscal year.

The Capital Investment programs have continued to serve as one of the major pillars in the Army's EEMI program. Investments of $87 million, approved under the Quick Return on Investment Program (QRIP), and the Office of the Secretary of Defense Productivity Investment Funding (OSD PIF) are expected to result in savings exceeding $140 million. Fiscal year 1983 also marked the first year in which new policies and procedures for decentralized funding of the QRIP and the transfer of project approval authority to the command level became effective.

The Value Engineering (VE) program contributes substantial dollar savings as well. The program is concerned with eliminating or changing anything that increases the cost of an item or process, but which is not necessary to its basic function. This year total VE savings decreased by 11 percent from $457 million in FY 82 to $405.3 million in FY 83. Savings of approximately $350.7 million resulted from the approval of 1,212 in-house VE proposals and an additional savings of $54.6 million followed from 328 approved contractor VE change proposals. The overall return on investment from FY 83 VE actions was $21 for each dollar invested. To implement VE Armywide, the Army instituted a Program Development Increment Package (PDIP) based on past successes. In addition, the Army plans to use savings from subsequent VE programs to initiate new programs at FORSCOM and TRADOC beginning in 1985.

Failure to provide the required guidance for national defense exemptions delayed the actions of the Commercial Activities (CA) Division this year. On 4 August 1983, OMB published a new version of the OMB Circular A–76, which had been revised during the fourth quarter. Although paragraph 8b of the revised circular permits the Secretary of Defense to establish criteria for national defense exemptions, by the end of the fiscal year the secretary had not provided this guidance. The lack of DOD implementing instructions has slowed down many of the actions of the CA Division. Without the required guidance, the CA Division has been unable to publish AR 5–XX, *Management of the Commercial Activities Program,* and therefore the field is suffering for lack of regulatory guidance.

Several other factors continued to delay the execution of the CA program: congressional concerns and legislative actions; overly protective policies with respect to commercial activities; shortage of personnel trained in OMB Circular A–76 and Army acquisition procedures; rapid turnover of key personnel; and too many cost studies to be completed simultaneously. Two primary issues—the accountable officer and core logistics—are delaying the production of some of the larger industrial based studies.

Resolution of these issues should produce a large number of finished products in fiscal year 1984–85.

On the other hand, this fiscal year the Army completed 44 cost studies of in-house activities: 20 of these investigations determined in-house performance to be the most advantageous method of acting, and 24 studies indicated contracting to be cost-effective for the government. As a result of these findings, the Army released 1,183 civilian spaces and 339 military spaces for utilization against other Army requirements. These decisions will also result in estimated savings to the government of approximately $51.4 million over the next three years.

The CA cost studies completed during the past five fiscal years and associated manpower data are noted in *Table 15.*

TABLE 15—COMMERCIAL ACTIVITIES
Cost Studies Completed

Number of Studies Completed	End Strength Involved in Studies Completed			End Strength Involved in Activities Completed			Projected 3 Year Cost Advantage to the Government
	Civilian	Military	Total	Civilian	Military	Total	
FY 79 20	705	14	719	441	0	441	$ 4.5M
FY 80 60	3,287	610	3,897	2,294	537	2,831	$60.0M
FY 81 72	2,103	663	2,766	1,047	341	1,388	$46.2M
FY 82 65	1,640	195	1,835	1,069	181	1,250	$37.2M
FY 83 44	1,654	339	1,993	1,183	254	1,437	$51.4M

The Comptroller of the Army Resource Management Corporation (RMC) conducted financial management workshops during the year, which provided the major commands and the Army staff with the opportunity to address commercial activities and training programs and objectives. The comptroller also furnished a forum for modifying programs of instruction to incorporate policy guidance changes from OMB and "lessons learned" from the field.

The Army Logistics Management Center (ALMC) established new courses this year aimed at the CA program and contracting in general and trained 6,686 students. The ALMC also established ten Management of Commercial Activities courses for FY 84, all to be given at on-site locations throughout the United States. The fact that ALMC is providing on-site instruction at installations rather than requiring all students to attend the courses at Fort Lee, Virginia, has increased the number of trained students as well as saved the Army significant amounts in TDY and travel expenses.

Financial management received a boost this year when the Army's Program Performance and Budget Execution Review System (PPBERS) experienced major growth. PPBERS became the main high management vehicle for the Army staff's budget execution review and feedback. PPBERS monitors on a quarterly basis the status of obligations and outlays; commercial activities; major weapon system procurement; personnel management; engineer programs; Army Reserve and the Army National Guard recruitment, retention, and training; and a host of other significant major management concerns. During FY 83, several new PPBERS topic areas evolved based on management needs. These areas included: FY 83 congressional limitations; force modernization; expiring program status; stock fund cash status; current reliability performance; Military Construction Army Reserve program execution; and integrated logistics support. Additionally during FY 83, the Army reduced the PPBERS review cycle from sixty days to forty-five days providing the Joint Select Committee (SELCOM) fresher and more relevant data.

In July 1983, the Army redesigned and enhanced its Central Banking Program (CBP) by awarding a contract to the Mellon Bank of Pittsburgh following evaluations of competitive bids. The switch to Mellon has resulted in procedural changes and system enhancements rather than a conceptual change for the CBP. Following the award of the contract to Mellon, the Army was able to transfer the $300 million account balances from First Chicago without the necessity of touching any of the funds in the DA Central Investment program—the money which these balances represent. The Army accomplished this by an elaborate system of crediting and wire transfers involving both banks and the NAF Financial Management Directorate. The new banking contract permits the Central NAF Payroll Office (CNPO) to debit individual fund accounts directly at the bank for actual payroll expenses and allows NAF investors two to three days additional interest on their payroll monies. The Central Accounting Office no longer has the task of reconciling payroll costs estimates with actual expenses.

As a result of analyzing the banking relationships and NAF cash flows in Europe, the NAF Financial Management Directorate and American Express International Banking Corporation authored a plan to analyze and utilize any excess cash deposits not needed by the Mellon Bank to meet payrolls. Although the amount varies depending on periodic inspection and changing requirements, initially $5 million was available for investment in the NAF Capital Investment program. The NAF is making available the interest earned on these monies for budgetary requirements of USAREUR.

Table 16 summarizes the CBPs activity during 1983.

TABLE 16—CENTRAL BANKING PROGRAM, FISCAL YEAR 1983

Quarter	Total Deposits ($ Millions)	Interest Rate	Interest Paid ($ Million)
1st	$264.1	10.0%	$ 6.6
2d	268.8	8.5%	5.6
3d	282.9	10.0%	7.0
4th	309.2	9.25%	7.2
Total			$26.4

This fiscal year the Army Audit Agency issued a number of reports covering problems found at numerous installations. Actions on the audit report recommendations should result in improved management of resources at all levels of command. The agency reported that: the Army's air traffic control program needed significant improvements to ensure that the services would continue in wartime and could be provided in an economical manner; policies and procedures for managing peacetime redistribution of equipment in the reserve components were inadequate to improve equipment readiness of early deploying units and ensure that units could be equipped in sufficient time to meet assigned deployment dates; the overall implementation of changes to the maintenance float program was inadequately planned and controlled to ensure that only equipment that contributed to combat readiness received float support; controls over international and local shipments of household goods were inadequate to minimize costs and ensure the effectiveness of carrier performance evaluations and quality of services; government property furnished to contractors was sometimes inadequately accounted for and safeguarded, and inventory losses occurred; the Army needed improvements in its followup system on contract audit recommendations to resolve, track, and report on the significant recommendations in the reports; the Army needed improvements in virtually every aspect of the NCOES to effectively respond to the leadership and technical training needs of noncommissioned officers; physical, personnel, and operations security measures implemented at data processing activities were inadequate to preclude the possibility of unauthorized access to and use of computer facilities or compromise of classified information; procedures and controls failed to ensure provision of adequate military occupational specialty training to enlisted members of the reserve components.

The Army Audit Agency also issued advisory reports to field commanders in the areas of amusement machine operations,

benefit-to-cost ratios used to justify civil works projects, commercial activities, and automation of economic analyses. The significant problems identified in these advisory reports were within the means of local commanders to correct and could be alleviated generally by adhering more closely to existing Army guidance.

Management Information Systems

"Managing the modernization effort requires reliable data and imagination enough to anticipate the future impact on the Total Army," declared Maj. Gen. Vincent E. Falter, Chief, Force Modernization Coordination Office, in October 1982. This year the Army's managing network wrestled daily with the fielding and resourcing of new and displaced information systems. Indeed FY 83 was marked by an explosive growth in military use of computers and sophisticated communications.

However, the time was rapidly approaching when the Army would no longer be able to manage effectively the information technologies through the decentralized mode, a traditional Army practice. Thus, it undertook a number of studies such as, the "Information System Planning" (ISP) study begun in September 1982, and other studies initiated this fiscal year, to determine HQDA's information needs and how to develop a plan to meet them. These investigations identified a need for some kind of functional realignment. After a review of a number of organizational options, the Secretary of the Army (SA) and the Chief of Staff of the Army (CSA) decided, during June 1983, to establish a field structure to support the flow and processing of information, and to establish a new Deputy Chief of Staff . . . "to integrate fully information functions (IRM [Information Resource Management] automation, administration, communications, and command and control)." The CSA declared that the ". . . key purpose of the reorganization is to improve our ability to share and manage information in achieving the Total Army Goals." The CSA also directed the Army to "acknowledge the criticality of managing information as an important Army resource and that centralized management of the key information functions and technologies is essential to an effective information resource management program."

To accomplish the reorganization, the CSA detailed Brig. Gen. Walter J. Bickston from the Office of the Assistant Deputy Chief of Staff for Operations and Plans for Command, Control, Communications, and Computers (C4), to the Chief of Staff's office, on 12 August 1983, to become Special Assistant to the Director of the Army Staff (DAS) for Information Resource Management (SARIM). Besides being responsible for establishing the

Office of the Special Assistant to the DAS for Information Resource Management (OSARIM), General Bickston was to develop a detailed implementation plan for the creation of the new Deputy Chief of Staff structure and a new field command.

Between 18 August and 28 September 1983, the SARIM planning team members met and prepared their plan, which they published on 28 September. The plan addressed the need for some restructuring throughout the Army to implement the challenge inherent in the CSA's message. It also provides for a systematic and orderly process from the designing phase through implementation and execution.

While the Army determined its information needs and developed a plan to meet them, it also focused on the following management information systems: Vertical Force Development Management Information Systems (VFDMIS), Force Structure Analysis System (FSAS), Force Development Integrated Management System (FORDIMS), The Army Authorization Documents System (TAADS), Structure and Composition System (SACS), and Force Management Impact Analysis System (FMIAS). FORDIMS was a new management computer system; the others the Army carried over from previous years.

The VFDMIS, designed to meet Army force and manpower management needs, continued testing its acceptance and deployment this year. In anticipation of this workload, the Army expanded the Office of the Product Manager and conducted initial field surveys of test sites at the Pentagon; Fort McPherson, Georgia; Fort Hood, Texas; and Fort Huachuca, Arizona. Meanwhile, the supporting contractors, Automated Sciences Group, Inc. and General Research Corporation, maintained their development and programming efforts. By the close of the year, the ASA IL&FM had approved buying software for the VFDMIS that ensures compatibility with the Army's Base Operation Support System, VIABLE.

The FSAS received a boost this fiscal year when the Army awarded a contract to Research, Inc., to develop an automated system which will allow HQDA command managers and Standard Requirements Code (SRC) managers to create and manipulate work forces. ADABAS, the adaptable data base management system chosen, will be resident at the U.S. Army Management Systems Support Agency (USAMSSA) and will use secure telecommunications and TEMPEST terminals as access devices. The development effort will require nineteen months to complete.

The use of TAADS continued to increase with two new sites, the 32d Air Defense Command and the 4th Transportation Command, both in Germany, added to the system. TAADS system now operates at seventeen MACOMs and sixty-eight installation

processing sites. At the close of the year, the Army had converted two MACOMs and nine installations and processed over three million update transactions in TAADS. It is beginning to prepare for the eventual replacement of TAADS with the VFDMIS.

By the close of the fiscal year, the Army was about to contract the redesign of the SACS. It is drafting the statement of work and planning to award the contract in May 1984. This is a six month contract to produce a functional description, which the Army will use to reprogram SACS.

The Army made considerable progress this year in the development of the integrated data base and the application software for FMIAS users. It placed the management data from the Basis of Issue Plan (BOIP), Force Accounting System (FAS), and the Standard Study Number Cross Reference file (SSN X REF) under the ADABAS data base management system. It also has working the Authorization Subsystem (AS), which replaced the TAADS, and the Program Budget Subsystem, which replaced AFP and CBS.

FY 83 was a very eventful year for automated logistics systems (materiel management information systems). The VIABLE Regional Data Centers began operating at three sites. This marked the transition from the 1970s IBM 360 Base Operations structure to a modern automatic data processing system. The Army also progressed in the development of several Standard Multicommand Management Information systems. It tested the Standard Property Book System (SPBS); extended the Standard Army Ammunition System–3 to its final site; successfully tested the Direct Support Standard Supply System enhanced planning and training on the new division computer; and demonstrated the Standard Army Maintenance System on its developmental computer. In summary, FY 83 inquiry terminals and printers enhanced the automated data processing (ADP) support to the personnel manager. Each management branch and staff section received these items, previously available only at division level, greatly increasing accessibility to personnel data. The addition of the automated Individual Record Brief (IRB) during the fiscal year provides a summary of the reservist's career and qualifications, eliminating the old Officer/Enlisted Record Brief which had to be prepared manually. A number of other actions greatly improved storage capability and responsiveness in all personnel management areas. They were the consolidation of officer and enlisted data bases into a single Officer and Enlisted Personnel Management System (OEMPS) data base; improvements in the Personnel Master File (PMF) and Standard Installation Division Personnel System (SIDPERS) inquiry programs, and continuous modifications and improvements to existing reports.

This year, the Military Computer Family continued through the advance development phase of computers. Three contractors produced large scale models, which the Military Computer Family tested with satisfactory results. To facilitate final production, it selected two contractors to produce full specification prototype models for Full-Scale Engineering Development (FSED).

The Army is expanding its use of the Decentralized Automated Service Support System (DAS3). The DAS3 is an automatic data processing equipment system designed to address the data processing needs of Combat Service Support (CSS) units in nonindivisional and corps areas of operation. It consists of a Honeywell Level 6 minicomputer with related peripheral devices mounted in a mobile 35 foot semitrailer. The Army hopes to field 240 DAS3 systems by 31 December 1983 and 230 more systems scheduled for delivery through FY 88.

In May 1981, the Army adopted the Post Deployment Software Support (PDSS) Concept Plan for Battlefield Automated Systems (BAS) to draw together efforts for improving software components of deployed weapons systems. Since that time, the program has grown to include nine DARCOM PDSS centers, two U.S. Army Computer System Command (ACSC) PDSS centers, and six TRADOC developer support facilities. Each of these activities is responsible for specified battlefield automated systems, of which some 270 have been fielded or will be fielded through 1988.

During the past year, the PDSS program moved forward in several areas. The commanders of DARCOM, TRADOC, and ACSC signed a memorandum of understanding on 1 June 1983 creating a steering committee, which meets quarterly to resolve PDSS problem areas that cross major command lines. Shortfalls in the original PDSS Concept Plan related to in-theater applications of PDSS were the subject of a contracted study, which has led to a number of actions to correct deficiencies. A broad analysis of the original plan has resulted in further improvements, a more clarified definition of requirements for software support of battlefield automated systems, and a new name for the program—Life Cycle Software Support (LCCS) program. A LCSS Implementation Plan was being developed and will be published during FY 84. Separate funding for PDSS or LCSS will also be initiated in FY 84.

Records and Publications Management

In August 1983, the Archivist of the United States granted the Army continuing authority to donate records maintained on foreign nationals to the foreign governments concerned.

Wherever Army personnel are stationed, the U.S. government has negotiated Status of Forces Agreements (SOFAs) or similar arrangements with host governments to define the status and legal obligations for the conduct of Army business and operations in those countries. Many of these SOFAs address Army employment of host country nationals and the applicability of host country labor laws and regulations. Records generated for foreign nationals employed by the Army outside of the United States sometimes must be maintained in an exceptional manner to satisfy the host country's legal requirements. With its new authority, the Army may now offer records to host governments without first obtaining approval of the Archivist of the United States for each individual transfer and when those records are no longer required by the Army's current record-keeping system. During 1984, the Army will publish new instructions regarding the disposition of Army records to foreign governments and will apply these new instructions throughout its overseas commands.

This year the Army initiated a pilot study of the Modern Army Record-Keeping System (MARKS) at 5th Battalion, 73d Armored Regiment, Fort Knox, Kentucky, to test and validate the system at the TOE unit level. Those efforts, which were fully supported by Headquarters, TRADOC and Headquarters, FORSCOM, combined with the acquisition of new automatic equipment have enabled the Army to improve its record-keeping system. During the three months following each pilot study, the Army will evaluate the data collected.

In May 1983, the Army published a regulation governing the Disposition of Machine Readable Records. The objectives of the Army regulation are to ensure permanent preservation of archival information, which is stored on machines and to provide for legal authorization for the disposal of all other machine readable records. The Army emphasized ADP documentation standards during the period of system development, and the use of existing ADP information sources.

Between the fall of 1982 and mid-1983, the Declassification Operations Branch, Records Management Division undertook a special project as a part of the Southeast Asia War Records Declassification Review Project. The special project, which was called the Southeast Asia Local National Employment Records Project, has enabled researchers to locate and verify the employment of Vietnamese nationals by the U.S. Army in Vietnam. The Army considers these records important in terms of U.S. humane responsibility and in case of future financial claims against the U.S. government should diplomatic relations with the People's Republic of Vietnam be established. The processing of these records has presented special problems because of sensitive foreign

interest as well as the interest of U.S. agencies, other than the U.S. Army, operating in Southeast Asia at the time of the Vietnam War. Nevertheless, the effort to sort, declassify, and rearrange as well as improve finding aids for the records created by the forces in Vietnam has assisted countless official and unofficial researchers looking into records of the Vietnam War. This situation will continue to improve as more records are processed.

The Access and Release Branch of the Records Management Division responded to approximately 5,500 requests from scholars, historians, members of the media, government officials, and other individuals for information from retired Army records. (These requests were in addition to 956 petitions for records under the Freedom of Information Act, and 68 under the Privacy Act of 1974, processed by the branch.) The number of requests from individuals applying to research Vietnam Era records continued to increase.

Requests from U.S. diplomatic posts around the world to verify previous U.S. government employment, Republic of Vietnam (ARVN) military service, and U.S.-based training of Southeast Asian military and civilian employees, also continued to increase dramatically this fiscal year, from approximately 400 in FY 81 to over 1,900 in FY 82, to 3,172 in FY 83. Verification of past affiliation and support of U.S. forces in Vietnam on the part of Southeast Asian refugees will determine their eligibility for priority immigration status.

The Army received 27,886 reportable requests for records and/or information under the Freedom of Information Act during FY 83. To process these requests required over ninety-five man-years, at a gross cost of $1,812,467. The Army collected a total of $169,131 for search and copying costs, as allowed by the act.

The Army continued its efforts this fiscal year to amend section 552 of Title 5, *United States Code,* to exempt the Army from the provisions of the Freedom of Information Act during periods of hostility. The Army will resubmit its request to the 98th Congress.

The Access and Release Branch was the principal Army action office in responding to requests for Army documents pertinent to the General Westmoreland law suit against CBS, a TAG Watch List item. The branch helped both the Capital Legal Foundation, representing Westmoreland, and CBS to locate and see documents. Westmoreland sued CBS when the latter, in a 90-minute documentary, "The Uncounted Enemy: A Vietnam Deception", alleged that Westmoreland was part of a conspiracy to deliberately underestimate enemy troop strength in Vietnam prior to the TET offensive of 1968, in order to manipulate

American public opinion and create the illusion that the United States was winning the war.

On 30 March 1983, General Maxwell R. Thurman, the Deputy Chief of Staff for Personnel, directed the adoption of the UPDATE publishing technique for all Army publications. The period of the transition is to be two years, with conversion of the distribution of A and B regulations to occur during the first year, and of C, D, and E publications during the second year. In conjunction with the Government Printing Office (GPO), Project UPDATE (Unlimited Potential Data Through Automation Technology in Education) solicited bids for a major new printing contract to implement the conversion of all publications during the transition period. Opening of bids for this contract will be 30 January 1984.

The Department of the Army Inspector General Force Modernization Inspection Team identified problems in the area of the publication of technical manuals for the Army's force modernization program. Specifically: a lack of publications-support planning; nonavailability of publications; and a lack of definitive publication policies. As a result of these findings, on 22 February 1983, the Adjutant General established, a Force Modernization Office for one year with the objective of ensuring that technical publications required for force modernization are available at the right place, in the right number, and at the right time. Since then, the office has, in coordination with GPO, drastically reduced the time required for the printing of new and revised technical manuals. It accomplished this through the establishment of "Direct Deal" contracts. Under this program, a contract is awarded to a specific printer to print and distribute technical publications for a single proponent command. The Force Modernization Office also began printing DA circulars pertaining to individual force modernization systems. Each circular lists those publications, which users require for operation and maintenance of the system and its components, and explains how to acquire these publications. The Army anticipates publishing a circular for each major force modernization system. Also, it has increased stockage levels of force modernization technical manuals and has identified those manuals that are nearly out of stock. The Army will continue to plan and implement various other policies and procedures to enhance publications support for the Army's Force Modernization efforts.

The modernization of the warehouse at the U.S. Army Adjutant General Publications Center, Baltimore, Maryland, moved into the final stages during this fiscal year. In preparation for the installation of the Integrated Storage and Materiel Handling System, the Publications Center initiated radical changes in the old

facility. The Army should award contracts for the final two components of the modernization project during FY 84.

The Army has designated the Baltimore Publications Center as the single source of blank forms support for Army activities worldwide. The Saint Louis Center, which previously enjoyed that role, is currently depleting its stock of forms. This project is tentatively scheduled for completion during the first quarter of FY 85.

Organizational changes, such as the New Manning System, financial management improvements and updated management information systems were Army efforts this year at developing superior units and conducting a more efficient modernization program. Its success in these endeavours contributed to its ability to achieve Total Army goals including qualitative advantages.

8

Logistics

This fiscal year the Army undertook a virtual revolution in logistics aimed at achieving one of its seven goals—the materiel goal—to equip and sustain a Total Army to win any land battle. It took the form of modifying the doctrine and techniques of management and planning, supply and maintenance, transportation, and security assistance used in support of a large modernized Army dispersed over a vast area.

Management and Planning

To help decision makers manage and plan more efficiently, this year the Office of the Deputy Chief of Staff for Logistics (ODCSLOG) conducted thirty-three analytical studies of problems, assessments, solutions, conclusions, recommendations, and methodologies to measure performance in the general areas of installations and logistics. The ODCSLOG plans another twenty-nine studies for FY 84.

The ODCSLOG Force Structure Division contributed to better management and planning by participating in the Army Models Improvement Program (AMIP) and the Army Logistics Analysis Community Review Committee, and continuing to exercise responsibility for review of logistically oriented commercial study proposals. Its emphasis this past year has been twofold: first to improve the exercise of combat service support in the emerging combat models the Army is developing, and second, to reduce the possibility of duplicative studies and analyses resulting from the geographic dispersal of agencies and activities.

Immediate benefits resulted from the conversion of the munitions systems support study from a study endeavor to an ongoing Army staff management action this year. Data from the study furnished Europe with projected stockage objectives and production availability through FY 88. Europe is able to use this information to plan requests for equipment (the Call Forward Program) on a year-by-year basis through the supporting POM period. This approach enables the Army to forecast with more accuracy the storage and transportation funds needed to support theater requirements.

The Army began testing the management and accountability of Army materiel at Fort Hood, Texas, this fiscal year. The one year test, which started in March 1983, monitored simplified procedures for documenting the loss adjustment of hand tools and conducting inventories of property belonging to III Corps. The purpose of the test was to examine the effects of current property regulations and procedures at the unit level, while still maintaining effective property responsibility. Test initiatives included considering hand tools costing less than $5.00 as expendable; authorizing unit commanders to adjust losses of hand tools when no negligence is suspected, where the total gross value of each loss does not exceed $100.00; maintaining at company level a document registering both expendable and durable items; and providing a clear definition of the responsibilities of the officer in charge and guidance to the personnel conducting the surveys and approving the survey reports.

Supply and Maintenance

The logistical revolution concerning supply and maintenance involved a number of activities this year. These included computer support for supply and maintenance studies, build up of ammunition stocks in Europe, funding Army Stock Fund, Army Industrial Fund (AIF), procurement appropriations, materiel condition status, depot maintenance program status, maintenance management improvement program, standard Army maintenance system, Army aircraft overhaul requirements, maintenance support activities, and base operations.

During FY 83, the Army used the Total Army Equipment Distribution Program (TAEDP)—a computer program for managing major pieces of Army equipment—as the principal data base to support key logistical studies and to support Army staff and congressional analyses of logistical issues, particularly concerning the equipment status of reserve components. These studies included the report of the Resource Management Review Select Committee in November 1982, "Equipping the Total Force" study (1982), "Project Relook," "Army Logistics Assessment," "Support Equipment Analysis," "Equipment Redistribution" study, "VCSA documentation" study, and Volume II of the DOD Force Readiness Report.

The Army undertook a major study this year to identify, assess, and resolve compatability deficiencies between TAEDP and its sixteen contributing data sources. As a result of the study and follow-up actions taken to implement it, the Army made substantial progress this year in resolving data base problems,

particularly concerning TAEDP's compatability with TRADOC basis of issue plans and the SAMPAM (System for Automation of Materiel Plans for Army Materiel)/Procurement Data Base.

FY 83 also was a period of extensive improvement in TAEDP capabilities. Enhancements to TAEDP included an innovative requisition validation system, war reserve comparison/deviation products, a Force Integration Staff Officer worksheet report, Army Modernization Information Memorandum worksheet and the incorporation of fiscal year funding into the TAEDP distribution scheme. Ongoing enhancements nearing completion by September 1983 included TAEDP Associated Support Items of Equipment (ASIOE) products, revisions to the POMCUS Authorization Documents System (PADS), the inclusion of a HQDA major item substitution policy in TAEDP and various system maintenance improvements. The development of the TAEDP modernization program continued during FY 83 with the completion of the functional description and development of the technical specifications.

The Army continued to build up ammunition stocks in Europe at a reasonable rate this fiscal year. The FY 83 Call Forward Program goal was to ship 68,000 short tons of ammunition for the build-up of pre-positioned war reserves and support of training. Retrograde plans sought to remove 25,000 short tons of older, superfluous munitions for utilization elsewhere. The retrograde action releases valuable storage space for new stocks of munitions. Ammunition shipments through the end of the fiscal year reached 97 percent of the goals set.

During the year, the Army decided to implement a policy of simultaneous obligation of ASF requisitions beginning 1 October 1983. Simply, this means that an obligation will be recorded in the books of the requisitioner as well as the ASF when the requisition is submitted rather than when the supplies are actually received. Under the new arrangement, the Army could control requisitions at the time of submission rather than be subject to the whims of an unpredictable delivery system. It would obligate funds for these requisitions against the current fiscal year, and not have to worry about the ability to pay for it in subsequent fiscal years and would have the ability to charge price adjustments to the year of the requisition, where it can be controlled, as opposed to subsequent years, where the unknown amount of deliveries would occur. This change will effect the entire finance and accounting network, supply system, and every individual that controls funds.

The ASF experienced a slow, constant drain on the amount of cash available to pay bills this year, which complicated the

conduct of day-to-day business. Contributing to the problem were changing demand patterns associated with force modernization, higher rate of progress payments allowed to contractors because of the economic situation in the country, relationships with non-Army defense agencies, and price changes not fully covered by pricing policies. Near the end of the fiscal year, stock fund managers initiated measures to guarantee solvency of the fund. For example, to provide management with information, they established a daily reporting system. Measures, such as these, improved the cash position of the stock fund by the end of the fiscal year.

Three actions taken during the year enabled AIF to achieve a more businesslike and efficient approach to operations and management. These actions were the Asset Capitalization Program (ACP), the Fiscal Year 1983 Appropriations Act, and Research and Development (R&D) Activities.

The ACP, which Congress approved for implementation this year, allows the purchase of capital equipment with AIF money, rather than with appropriated funds, the previous policy. The AIF receives cash to purchase equipment by charging the customers of the industrial fund for depreciation expense. The new program provides AIF managers more flexibility in making purchasing decisions, while fixing responsibility for good planning and management at the operating level.

The FY 83 Appropriations Act eliminated artificial civilian manpower ceilings in industrial fund activities. Now the employment of civilians is based on work load requirements. Initial feedback from these activities indicates that the new policy allows cost savings and a better response to changing work loads, a condition that is expected to continue into FY 84.

To provide more consistency in the way we do business in the Army, the Army finalized plans this fiscal year to remove R&D activities from the AIF. Of the three R&D activities that receive AIF funds, two are scheduled to receive appropriated funds in FY 84, and the remaining one at the end of FY 85.

Funding levels for appropriation financed secondary items in FY 83 amounted to $1,417 million, compared with $1,061 million in FY 82. The increase of $356 million reflects the need to support new weapons systems being fielded as part of the modernization program, and inflation. Funds for purchasing secondary items spare parts covers replenishment and initial spares necessary to support the modernized Army. Full funding for secondary items, including spare parts, supports the peacetime Army and maintains the combat-readiness of its equipment.

The Army made major changes this year in the procedures for reporting the materiel condition of weapons systems. It

changed the frequency of reports from quarterly to monthly for Active Army units, but maintained quarterly reporting for the National Guard and Army Reserve. To help units report on a weapons systems basis, the new DA Pamphlet 738–750 now lists equipment configured as systems. These changes will enable managers to pinpoint problem areas and identify the subsystem contributing the most deficiencies.

Depot maintenance activities had an unfinanced requirement of $232 million this fiscal year as a result of both congressional reductions and increased demands. The projected unfinanced requirement through FY 85 is $131 million for the maintenance of Army materiel and $269 million for the maintenance of support activities.

Since 1979 the Army has maintained a Maintenance Management Improvement Program (MMIP) to eliminate serious maintenance shortfalls. The Army designed MMIP to attack root causes and to focus command attention on the tasks of upgrading maintenance operations, strengthening maintenance training, improving publication, and supporting tools and repair parts. DA Circular 750–83–3, published this fiscal year and effective 15 November 1983, defines objectives, assigns responsibilities, and establishes methods and implementation procedures for the MMIP.

The Standard Army Maintenance System is an automated logistics management system, thirteen years in development, that will provide maintenance management from direct support and general support units at retail level up through DARCOM at the Army wholesale level. This year the ODCSLOG and the ODCSOPS sought unsuccessfully to obtain $17 million for system hardware and to accelerate fielding. Despite this set back, they initiated efforts to move the starting date for the operation of SAMS from January 1986 to January 1985. As has happened before in SAMS (Standard Army Maintenance System) history, the software for SAMS has reached a state of maturity, but the ADP equipment needed to process the system is still unavailable.

This year the Army codified its policy concerning aircraft overhaul requirements. Before FY 74 the Army based its aircraft overhauls on an engineering estimate that an aircraft airframe required a depot-level structural inspection and overhaul every five years. This meant that the Army was overhauling 20 percent of its total aircraft fleet every year. An evaluation of airframes being inspected and overhauled, on this calendar basis, revealed a wide disparity in airframe conditions ranging from little or no depot-level attention required to a major reworking of critical structural components. These revelations became the basis for the Army's new philosophy termed On Condition Maintenance

(OCM). Under OCM, a depot trained Airframe Condition Evaluation (ACE) team would evaluate aircraft of both active and reserve components, at the owning unit's airfield. After assigning a series of points to airframe areas needing depot-level inspection and overhaul, the team would rank every aircraft in numerical order of total points awarded. Based on this ranking, they would call first into the depot the aircraft most in need of repair. OCM has provided the Army with a sound methodology to identify and correct structural deficiencies only on those airframes that need it. The result has been an average reduction in the numbers of aircraft called in each year for overhaul from 205 to 105, with a coinciding reduction in cost.

The Pavement Maintenance Management System (PAVER) is an on-line, interactive decision support system to assist pavement maintenance managers in the Army, Air Force, and Navy to program their maintenance activities for roads, streets, and airfields, so that they can extend the service life of the pavement and use to best advantage the limited funds available for such maintenance. This system, which is on the Boeing Computer Service, is now available to private and public sectors for use. The University of Illinois Department of Continuing Education provides the training for using PAVER to all DOD elements as well as to city, state, and foreign government transportation planning commissions. The University has trained more than 125 people in and out of the government.

Late passage of the FY 83 Defense Appropriation Act combined with numerous large unspecified budget reductions forced many installations to reprogram funds this year from other Operations and Maintenance Appropriation programs. For the first time, Base Operations were responsible for funding bachelor housing furnishings, administration, the Army lease program, and project VIABLE. To improve spending and decrease money obligations late in the year, the bases committed funds early for annual contractual obligations and for supply costs upon requisition instead of receipt. These approaches shifted spending away from previous year-end patterns. Base Operations' total money obligations, for this fiscal year, amounted to $2.4 billion, or 14.9 percent of the total obligations of the Operations and Maintenance Appropriation.

Transportation

In the area of transportation, this fiscal year the Army focused on continuing the development of programs begun in previous years and the initiation of a new computer system. The programs carried over from last fiscal year included the CONUS

Mobility Analysis, logistics over the shore, containerized shipping and the improvement of two computer software systems—the Department of the Army Standard Port System Enhanced (DASPS–E) and the Department of the Army Movement Management Systems (DAMMS). The new computer system initiated in FY 83 was called the Transportation Coordinator, an Automated Command and Control Information System (TC ACCIS).

This year the ODCSLOG Strategic Mobility Division maintained its course in developing a systematic method of assessing the Total Army strategic mobility system. The long term goal is to establish a process that will identify system deficiencies and choke points, consolidate visibility over Army mobility programs, and take corrective measures to ensure a balanced capability. This effort, which is called the Army Strategic Mobility System Assessment (ASMSA), will encompass the total "origin to foxhole" system, including men and materiel outbound from CONUS, strategic movement, and intratheater delivery. Specifically designed to support the Army logistics assessment program, ASMSA will initially concentrate on capabilities to support the European theater, followed by the Southwest Asia and Pacific theaters. ODCSLOG began coordinating its efforts with Army MACOMs to obtain information and recommendations concerning study methodology and system capabilities. ASMSA intends to define for the Army those areas where resource investments will yield the greatest return in terms of total system capability.

The ASMSA program, and the actions resulting from it, affect planning for operations on foreign shores. The logistics over the shore (LOTS) program is primarily concerned with operations by the Rapid Deployment Force in regions without extensive port facilities. During FY 83, the Strategic Mobility Division (ODCSLOG) continued to pursue an aggressive five-year watercraft program to provide sufficient LOTS capability to support contingency operations in those areas of the world where commercial ports are inadequate, unavailable, or denied. This fiscal year the Army put into operation the first lighter, air cushion vehicle (LACV–30) company and awarded contracts for twelve additional LACV–30 craft required to field a second LACV–30 company. In addition, the Army continued steps that will enable it to eventually incorporate Navy-developed causeway systems and equipment into the Army's watercraft inventory and LOTS capability.

Containerized shipping has become one of the most important innovations in moving supplies and equipment in the last three decades. In FY 83, the ODCSLOG tasked the U.S. Army Concepts and Analysis Agency (USACAA) to develop a computer model and methodology for analyzing containerization in a

theater of operations. In September 1983, USACAA presented a preliminary report of phase I of the study, titled the Containerized Cargo Distribution Analysis (COCADA). Unified Commands and MACOMs can apply the methodology developed in phase I to analyze the maximum possible containerization in a theater of operations. The phase II follow-on, scheduled for FY 84 will continue developing a model to determine the impact of various policies on the utilization of containers and their equipment on all the components of a theater distribution system—force structure, facilities, storage locations, and the transportation network available to move containers.

The Army initiated efforts this year to develop a new computer system to support transportation. The TC ACCIS will link the Military Traffic Management Command (MTMC) with installation transportation offices throughout CONUS. The Defense Communications Agency and the Joint Deployment Agency are developing the prototype system, which the Army hopes to test as a joint system in May 1985. The Army also continued to develop other automated systems begun in previous years. The development of the DASPS-E made progress toward a fielding target date of May 1985. In FY 83, the Army conducted a Software Qualification Test (SQT) and continued to produce DASPS-E hardware with delivery expected to be on schedule for all eleven sites. The Army also made progress developing a functional description for the DAMMS Redesign, an on-line interactive system to manage the theater transportation pipeline and commit and manage theater-level truck assets. The Army hopes to complete DAMMS Redesign in November 1984 and to field the DAMMS Movement Planning Module, to USAREUR in January 1985 and to EUSA in February 1985. The DAMMS Movement Planning Module automates the theater wartime movements program and provides the capability to analyze transportation networks, intermediate trans-ship points, and receipt and asset capabilities.

Security Assistance

The logistics revolution also extended to the area of security assistance. Here the Army continued to conduct programs in security assistance designed to assist friends and Allies to acquire and maintain the means of defending themselves. This year these programs, which support U.S. foreign policy, involved 122 countries and international agencies, consisted of Foreign Military Sales (FMS) programs; Military Assistance Programs (MAPs); International Military Education and Training Programs (IMETP) and Coproduction programs.

This fiscal year, the Army participated in the development of several security assistance legislative initiatives intended to improve the management of the security assistance program. Among these were proposals for antiterrorism training, reciprocal exchange of U.S. and foreign students between military professional schools in the U.S. and abroad, reprogramming of funds allocated to IMETP, and removal of prohibitions on U.S. strategic trade with China.

The Army also embarked on a CSA initiative to increase Allied combat capability, through the remainder of this century, by improving U.S. equipment presently in Allied hands. The Army is determined to improve U.S. weapons in the inventories of those countries that desire high technology from the United States but cannot afford it. Hence, it is looking first at "middle developed" countries such as Turkey, Greece, Spain, Portugal, and Korea to see to what degree it can apply already developed product improvements to the inventories of these countries and produce cost-effective results. By supplying the technology, training, or production equipment required for in-country production, the Army intends the receiving country to gain the advantages of an expanded economy and an increased ability to sustain itself in war. As the occasion arises, the Army may also apply such product improvements to Army Reserve, National Guard, and Active Army equipment assets to improve Total Army combat capability.

Also during FY 83, the U.S. Army School of the Americas (USARSA) at Fort Gulick, Panama, which provides military education in Spanish, enrolled more than 18,000 students. USARSA offers a wide spectrum of courses ranging from professional development training to training for cadets, officers, and enlisted personnel of participating Latin American countries. On 19 November 1982, eighty-eight infantry officer candidates from Honduras received their commissions, becoming the first officer candidate class to graduate from USARSA in its thirty-six year history. A total of 41,283 students from twenty Latin American countries have graduated since 1946 when USARSA was founded.

Security assistance to NATO members and other European countries remained a high priority this fiscal year as the Army continued to participate in programs to improve the combat effectiveness of its European Allies. Significant developments occurred in foreign military sales, cooperative initiatives and efforts for future arms development and production in three areas: 1) NATO countries have agreed to make the total NATO defense market available to the defense industry of all alliance partners. This "two-way street" has had little success between other NATO

countries and the U.S., but projects between European members have multiplied. 2) They have implemented dual production armament programs so that weapon systems of one NATO country are available to other NATO forces at low unit cost. Negotiations for coproduction of modern weapons by non-NATO European Allies also continued to advance this year. 3) Also, "family of weapons" agreements are now in force for new developmental projects, so that NATO countries can incorporate modern technology in various systems without duplicating research and development costs.

By the end of the fiscal year, the following major trends in security assistance to NATO members became evident: 1) Allied efforts to assist NATO's two poorest members, Portugal and Turkey, had not progressed significantly in producing the extensive modernization necessary. The Allies will have to increase efforts at strengthening and modernizing NATO's southern flank. 2) The Allies also will have to review carefully dual production arrangements because of DOD concern about the impact on the U.S. production base and the accompanying release of sensitive defense technology. 3) Constant solicitation of Allies for sales of certain weapons must continue in order to provide sufficient orders to keep production lines going and, in some instances, to expand their base. Long production lead times continue to frustrate modernization efforts, even when funds become available. 4) The basis for security assistance to some NATO Allies requires shifting from perceived relative formulas to recognized requirements. In FY 83, the Allies directed their treaty negotiations toward this goal by consistently pressing for "best efforts" pledges. Nevertheless, they concluded some accords that linked specific aid amounts to percentage formulas based on aid received by other nations. 5) Although the U.S. and Greece concluded a lease rights treaty, the U.S. is still negotiating with Portugal for such an agreement.

The Army participated in security assistance programs outside of NATO as well. During FY 83 the existing security assistance programs for Saudi Arabia continued to expand. Ongoing programs included the mechanization of two Army brigades and the Saudi Arabian National Guard (SANG) modernization program. Substantial U.S. security assistance to Egypt has helped to stabilize the readiness posture of the Egyptian Armed Forces, which had continued to diminish as aging Soviet equipment became inoperative for want of spare parts. Due to the immensity of Egypt's modernization program, and given current funding authorization levels, it is unlikely that the security assistance program will make a significant impact on the Egyptian Armed

Forces' readiness posture until FY 86. Since 1982, the Egyptian IMETP has continued at the level of $2 million, one of the largest in the world, with over 300 officers trained in CONUS this year alone. Jordan, also, is one of the largest IMETP recipients.

Because a strong and integrated armed forces is essential to Lebanon's survival and to any hope for peace, the U.S. government has provided approximately $262 million in military assistance. M48A5 tanks, M198 artillery howitzers, M13A2 Armored Personnel Carriers (APCs), and communication equipment are among the major items Lebanon is receiving. In addition, mobile training teams, totaling approximately 100 trainers, covered subjects ranging from logistics and maintenance of communications, armor, ammunition, and artillery to basic and advanced individual and unit infantry training. This fiscal year, DOD dispatched thirty-seven teams to Lebanon to assist in the rebuilding process.

Israel continues to maintain a generally recognized margin of superiority over any combination of potential opponents. They used fiscal year 1983 foreign military sales financing for air defense, armored and tracked vehicles, artillery, missiles, and ammunition.

Twenty-six Latin American countries received U.S. security assistance during FY 83. The high points of the security assistance program during this period consisted of congressional approval of authorizations of $10.5 million for Honduras, $8.5 million for El Salvador, and $3.25 million for Jamaica. Central America continued to demand the bulk of U.S. security assistance in the hemisphere. One program established a RMTC for Central America in Honduras.

Military-to-military relations with Latin America, however, continued to suffer as a result of U.S. support for Great Britain during the Falkland Islands War between Argentina and the United Kingdom. As a result of this crisis, western solidarity against Soviet or Cuban supported insurgencies and subversion weakened considerably, and thus dampened the effects of the U.S. security assistance effort in the region.

Security assistance to African countries this year emphasized mobile maintenance training teams and nation-building projects. The security assistance program in Somalia concentrated on establishing a system to sustain the equipment provided in FY 82. To support Chad stability, when Libyan-backed rebels invaded the country, the president authorized $25 million in emergency assistance, in the form of airlifts of vehicles, weapons, ammunition, individual clothing, equipment, and spare parts. The fiscal year program in Djibouti provided the initial funding for engineer construction equipment. In Kenya, security assistance

continued emphasis on the helicopter program and the delivery of TOW missiles in June 1983 to enhance Kenya's antitank readiness. Security assistance to Morocco consisted of completing the M48A5 tank conversion program, an airlift of artillery ammunition, and the second U.S.-Morocco Joint Military Commission in Washington in May, which stressed enhancement of their logistics infrastructure and support capabilities.

The Army participated in a number of security assistance programs in Europe this year, including those in Denmark, Switzerland, and Turkey. In June 1983, Denmark received the first two leased batteries of Improved Hawk missiles, and in the next fiscal year will receive two more. Because Denmark expressed interest in obtaining a fifth and sixth battery, under acceptable financial terms, the Army was exploring a composite lease-purchase arrangement for Denmark at the end of this fiscal year.

Switzerland has continued its negotiations to both procure and coproduce the basic TOW and the basic Stinger missile systems. The Swiss also announced, on 24 August 1983, that they were acquiring 210 German Leopard–2 tanks, after three years of testing and evaluating both the U.S. M1 tank and the Leopard–2 tank. Among the reasons for choosing the Leopard–2 tank were availability date of 1984 versus 1986 for M1, greater participation in coproduction combined with lower overall total cost, and the fact that the Leopard–2 "speaks German."

In June 1980, Turkey received the technical data for converting 2,800 M48 series tanks to the M48A5 configuration and, under a U.S.-Turkey lease agreement, plant equipment. The plan was for Turkey to purchase 500 conversion kits annually from the U.S. through FY 86, while increasing in-country productions, until Turkey was producing 44 of the 57 subkits in each kit. By the end of FY 83, Turkey had completed three tanks, and expects to complete 180 in 1984 and to attain a maximum capability of 500 per year when a second conversion line opens in 1985. The total foreign military sales value of the program at the end of FY 83 equaled $240 million.

Several widespread events continued to affect security assistance programs for the Pacific region during FY 83. These were the instability in the Indian Ocean area and Southwest Asia caused by the Soviet invasion of Afghanistan and the threat of further Soviet advances into Pakistan and Iran; Socialist Republic of Vietnam (SRV) occupation of Kampuchea (Cambodia) coupled with Thailand's tacit allowance of anti-Vietnamese elements operating from inside Thailand; internal problems in the Philippines; and the potential for conflict on the Korean peninsula.

Under the FY 83 Taiwan FMS training program, Taiwan personnel continued to receive U.S. Army training primarily of a technical nature in approximately thirty-five courses of instruction. This type of training represented follow-on support for defense articles previously furnished Taiwan.

The United States contribued to South Korean security through a commitment embodied in the Mutual Defense Treaty of 1954, the maintenance of U.S. troops in Korea, an extensive military sales program, IMETP training, and technical cooperation in development of selected Korean defense industries. Extensive coproduction and coassembly programs operated effectively this year, to include small arms munitions, M16 rifles, Vulcan air defense guns, helicopters, and tank munitions.

Japan continued to purchase military equipment, services, and training of a defensive nature from the United States. Japan also continued to conduct a vigorous licensed production program. This program enhances Japan's defense posture, expands the Japanese defense production industrial base, and increases its capability for wartime sustainability and interoperability with U.S. forces. Coproduction agreements with the U.S. involved production of such systems as 8-inch howitzers, Nike Hercules and Improved Copperhead, Stinger, Patriot missile systems, and the AH–1S helicopter. During the year, Japanese Ground Self Defense Forces received professional or technical training in the United States and approximately 1,600 personnel participated in the I-Hawk (Improved) and Nike annual service practice at Fort Bliss, Texas.

The threat of Socialist Republic of Vietnam (SRV) incursions along the Thai-Kampuchea border continued to stimulate Thai concerns and requests for security assistance. The U.S. delivered artillery and air defense equipment on an expedited basis to demonstrate U.S. support for the government of Thailand.

The U.S. government continued to emphasize the importance of the U.S.–Pakistan relationship. It targeted security assistance on deficiencies in Pakistani defenses and obsolescence of existing equipment. Pakistans' needs included armor, air defense, and other combat capabilities. The U.S. security assistance relationship developing with Pakistan, however, tended to stiltify U.S. relations with India.

In FY 83, ninety-one countries participated in Army FMS programs. The program for Supreme Headquarters Allied Powers, Europe (SHAPE), valued at $5 thousand, represents the smallest, the one for Saudi Arabia, valued at over $22 billion, was the largest. Other large programs that the Army has continued this fiscal year are $2.6 billion for Israel, $2.1 billion for Egypt,

$1.3 billion for Jordan, $1.0 billion for Korea, and $1.0 billion for Germany. The programs for these six countries comprise over 75 percent of the total value of the Army's security assistance open cases.

Total new orders in the Department of Defense for FY 83 for security assistance equaled $18.3 billion, of which the Army-managed share amounted to $4.2 billion. Security assistance new business is generated from amendments and modifications to prior year cases and new orders implemented during the year. At the end of FY 83, the FMS programs amounted to $42.0 billion. The status of this program at the close of the fiscal year is indicated in *Table 17*.

TABLE 17—ARMY SECURITY ASSISTANCE OPEN PROGRAMS, 30 September 1983

	Total	($ in billions) Delivered	Undelivered
DARCOM	21.5	12.0	9.5
Non-DARCOM	20.5	11.6	8.9
(COE)	(17.7)	(10.9)	(6.8)
(DLA/GSA)	(2.4)	(0.6)	(1.8)
(Other)	(0.4)	(0.1)	(0.3)
TOTAL	42.0	23.6	18.4

COE: Corps of Engineers
DLA: Defense Logistics Agency
GSA: General Services Administration

The Corps of Engineers (COE) has a substantial construction program in Saudi Arabia, which accounts for most of the $17.7 billion managed by the corps. The COE plays a supervisory role, while both U.S. and foreign civilian contractors accomplish 90 percent of the workload.

The general upward trend in equipment diversions continued during FY 83. President Reagan approved diversions to support Allies and friendly nations faced with ongoing or imminent threats, or to fulfill certain foreign policy commitments. The principal recipients were El Salvador, Lebanon, and Honduras. This year's diversions involved 102 armored personnel carriers, 1,033 radios and 2,050 TOW missiles. In addition, the Army diverted 677,022 rounds of large caliber ammunition during the fiscal year, a 233 percent increase over the 203,319 rounds diverted the previous year.

Current high demand items are those pieces of equipment and weapons systems used by the Active Army and provided to FMS customers. The most important ones are the M60 series tanks; the M48 series tanks; the M109 series howitzers; the M110 series howitzers; the M113 series carriers; the M198 series

howitzers; the TOW launchers and missiles; the I-Hawk missiles and battery sets; the Chaparral missiles and launchers; the Stinger weapons system; the 155-mm. artillery ammunition; and radios.

The Army is currently building a stock pile of these high demand items through the Special Defense Acquisition Fund (SDAF). In anticipation of urgent foreign requirements, the SDAF purchases the short supply items minimizing the need for future diversions from Army units. This fiscal year the Army SDAF program spent $98.5 million for 54 M198 howitzers including support items and ammunition, 1,424 AN/VRC–12 radios, 1,810 AN/PRC–77 radios, and 600 Stinger missile systems. They also procured 81,000 rounds of 155-mm. HE (M107) projectiles and 21,052,080 rounds of 5.56 cartridge balls.

Since FY 80, the Army's MAP has been diminishing, as former grant aid recipients become foreign military sales purchasing nations. Consequently, congressional appropriations for the MAP program are gradually phasing out. During FY 83, OSD allotted $8.4 million in grant aid to Army programs in fifteen countries for training aids and devices under IMETP. The total ongoing undelivered grant aid programs for all previous years involved thirty countries and had a value of $579.0 million.

Coproduction enables a foreign government, commercial firm, or international organization to acquire the technical "know how" to assemble or manufacture an Army weapons system in whole or in part. The Army initiated its first coproduction program with NATO in 1960 for the Hawk missile system. Since then the Army has participated in thirty-two projects with thirteen foreign countries and NATO. FY 83 coproduction programs include the AH–1S helicopter with Japan, the Stinger missile system with Germany and NATO, and 105-mm. ammunition with Egypt. A memorandum of understanding requires the foreign producers to purchase U.S. components. The total dollar value for all coproduction projects through FY 83 amounted to $6.4 billion, of which $2.4 billion will be returned to the United States.

The Personnel Exchange Program (PEP) established new positions this fiscal year with Ecuador, Bolivia, Colombia, Honduras, Paraguay, Portugal, Spain, and Venezuela. In addition, the PEP approved two new positions with the British Army. At the end of the fiscal year, the PEP had ninety-eight finalized positions, and another ten in some stage of discussion.

The action to improve coding of Foreign Area Officer (FAO) manpower requirements continued throughout the fiscal year. The FAO steering committee met on 10 March 1983 to define

career development for regional additional skill identifiers. The Army also revised DA Pamphlet 600–3, in which Chapter 48 provides general FAO career development requirements.

As for education for FAOs, the Army logistics office in Hong Kong developed a new in-country studies program of instruction for China FOAs. The Army also established a new correspondence language course for foreign area officers, who are unable to attend the five month resident course in basic French and Spanish at Fort Bragg, North Carolina. The School of International Studies, under the guidance and testing of the Defense Language Institute, Monterey, California, supervises the course. The school initiated a cooperative degree program with Campbell University (located in Buie's Creek, North Carolina) and plans to expand this program to include the University of North Carolina, North Carolina State, East Carolina University, and the University of South Carolina. The Chief of the Strategy Plans and Policy Directorate, Americas-Asia Division and the Director of the School of International Studies signed a memorandum of agreement to publish a FAO newsletter twice a year. They have scheduled the first newsletter for early 1984.

A total of 6,724 foreign students received military training in the Continental United States under U.S. Army sponsorship during FY 83, and 2,553 under the FMS program. Training funded under the IMETP equaled approximately $12 million, under FMS about $24.5 million. Participating countries fund the International Fellows Program (IFP) for foreign students at the Army War College, through FMS or IMETP. During the 1983–84 academic year, Australia, Austria, Egypt, Germany, Italy, Israel, Japan, Jordan, Korea, Mexico, Morocco, Netherlands, Nigeria, Saudi Arabia, Singapore, and Tunisia participated.

In January 1983, the Assistant Comptroller of the Army, Security Assistance Division, held a meeting to discuss and resolve problems involving financial management and control of IMETP–TLA (Travel and Living Allowance). Those attending were from the Department of the Army staff and Major Army Commands (MACOMs) responsible for IMETP–TLA. The meeting resulted from a study made in 1977 by the Office Chief of Staff Management Division titled "The Army Security Assistance Program Study" report (TASAPS–77) and a study performed by Stephen J. Lesley, Foreign Training Officer, Security Assistance Division. Both studies identified problems with the present system of executing TLA (Travel and Living Allowance) and especially those encountered by the overseas commands that seemed to result from distance and time restrictions. To better track funds to the program, respond to emergency requirements, and eliminate large unobligated balances at year-end, the attendees at

the January meeting recommended that the Army transfer the management of the TLA function from the Army's component of the Unified Command to TRADOC-Security Assistance Training Field Activity (SATFA). The centralization of TLA funding at TRADOC, the Army believes will greatly improve the execution of the IMETP appropriation. Having appropriation directorship, program, funds, and accounting centralized at one place will result in optimum utilization of funds, timely response to the program, and preclude a possible violation. The Army anticipates that the centralization of TRADOC–SATFA will occur in FY 85, when TRADOC will have acquired the necessary people and automation to undertake the responsibility. Meanwhile, the U.S. Army Finance and Accounting Center (USAFAC) will serve as interim financial manager and finance and accounting office for the IMETP–TLA funding program.

Plans moved forward in FY 83 to establish a permanent secretariat for the Conference of American Armies (CAA), which has been meeting biennially since 1960, to deliberate security issues of mutual interest. Toward this end, the Interim Permanent Secretariat (IPS), headed by Chief of Staff of the Army, General Edward Meyer, took a number of steps. They developed, for approval by member armies, changes to conference regulations to establish a permanent secretariat, promoted the implementation of the XIV CAA Agreements through publication of a bimonthly Conference Information Bulletin, proposed professional staff officer-level seminars to continue the dialogue of conference themes, and assisted the host country in the preparation and conduct of the XV CAA.

This year's modification of logistics doctrine and improvements in logistics techniques in concert with the modernization effort has, to paraphrase General Donald R. Keith, Commanding General, U.S. Army Materiel Development and Readiness Command, helped to prepare the Army for the broad range of scenarios it will face as it evolves into the Army of the 1990s. The Army's task, however, is far from over. At the end of FY 83, Lt. Gen. Richard H. Thompson, Deputy Chief of Staff for Logistics, stated: "We have turned the corner in logistics. We have identified today's problems and established mechanisms to anticipate tomorrow's, but we must keep up the momentum in order to achieve the materiel goal. The way to do this is to continue the logistics revolution."

9

Research, Development, and Acquisition

At the end of FY 82, Lt. Gen. James H. Merryman, Deputy Chief of Staff for Research, Development, and Acquisition (DCS RDA), noted that "because of the successful R&D efforts of the 1970s, the Army was ready to meet the challenge of equipping and modernizing the Total Force, of making the hollow Army a thing of the past." This fiscal year the Army made great progress in modernizing its Active Army units in conjunction with its reserve components by bringing aboard new equipment, upgrading old equipment, improving management procedures, and providing new and improved systems that cover the full spectrum of its missions' needs. Such initiatives required bringing to fruition the Army's research and development efforts of the past decade, and pursuing a materiel acquisition program geared to equipping the force in a timely manner. The Army's research, development, and acquisition effort this fiscal year was designed to assure that it had a technological edge on the battlefield of tomorrow.

Research, development, and acquisition, as described in the 1982 DAHSUM, encompass a complex life cycle of Army materiel ranging from conceptualization through validation, development, and production and deployment. Conceptualization grows out of the study of threat projections, technological forecasts, and determination concerning potential equipment, or materiel systems, including complex weapons, that would be useful to the Army under known and projected circumstances. In the validation phase, the Army verifies preliminary designs and engineering plans; resolves or minimizes identifiable logistical problems; and generally validates the concept for full-scale development. During the development phase, the Army develops, engineers, fabricates, and tests an item then decides whether or not to accept the item and enter it in the inventory. Finally, in the production and deployment phase, the Army trains the operational units in the use of the item, procures the item, and distributes it to the field. It is a long process of applied science, manufacturing, and distribution. The extent to which the Army can undertake all of the above depends on the funds allocated for it in the president's budget.

Budget

The Army based its initial approved research, development, test, and evaluation (RDTE) program for FY 83 on the president's budget. As in the previous fiscal year, the Undersecretary of Defense for Research and Engineering (USDRE) identified certain program elements as being of special interest and thereby placed constraints on the program. For example, the Army had to designate total programs in funding categories 6.1 and 6.2 of USDRE interest to maintain the approved dollar levels for these categories. In addition, the Army was unable to shift funds from twenty-eight specific programs that were of special interest to USDRE, without prior approval from the Office of the Undersecretary of Defense for Research and Engineering (OUSDRE). Some of these programs were Laser Weapons Technology, High to Medium Air Defense, Night Vision Advanced Development, Tactical Surveillance and ECM Systems, Joint Tactical Fusion Program (JTFP), Battlefield Data Systems, Joint Tactical Information Distribution System, NAVSTAR Global Positioning System, and the DOD High Energy Laser Test Facility.

Deferrals in the overall RDTE program totaled $494.3 million. This included $55.4 million for total risk assessing cost estimates (TRACE), $164.7 million for New Starts, $252.7 million based on USDRE Format I's, and $21.5 million for other individual programs. Major programs the USDRE withheld included Ballistic Missile Defense (BMD) Advanced and Systems Technology program; All Source Analysis System (ASAS); Battlefield Data Systems; and numerous other communication systems.

The Department of the Army RDTE appropriation, enacted in late December, was $3.879 billion, a reduction of $624 million in the Army's RDTE request of $4.503 billion. Major congressional reductions included: Technology Base, $35 million; BMD Systems Technology, $351 million; Antitactical missiles, $17 million; Mobile Protected Gun, $27 million; Joint Service Rotary Wing Aircraft Development, $19.8 million; JTFP, $15 million; Productivity Investment (DARCOM RESHAPE); $14.1 million. Programs receiving zero based budgeting from Congress were High Energy Laser Components, $33 million and Advanced Rocket Control System, $27.8 million. Offsetting these amounts were increases of $10 million for VIPER alternatives and $50 million for Manufacturing Methods and Technology. As a result of reprogrammings, the FY 83 RDTE program as of September 1983 amounted to $3.895 billion; obligations as of that date totaled $3.628 billion and disbursements equaled $2.064 billion. These areas were within the DOD acceptable range.

The Army procurement appropriations FY 83 obligation plan amounted to $17.035 billion; $15.413 billion for direct Army procurement and $1.622 billion for reimbursable customer sales. The plan covered all obligations in FY 83 funds appropriated for fiscal years 1981–83. Obligations incurred during the year actually were under the plan by $1.535 billion ($1.095 billion in direct and $.440 billion in reimbursables). Total obligations of $15.500 billion included $14.318 billion in direct Army procurement and $1.182 billion in reimbursable customer sales.

The Army procurement portion of the budget request for FY 83 amounted to $19.192 billion—a $3.142 billion increase over the FY 83 appropriation. The increase would permit higher production rates for several weapon systems, including the AH–64 attack helicopter (Apache), Patriot air defense missile system, Hellfire missile, TOW 2 missile and the multiple launch rocket system (MLRS). Requests for the weapons and tracked combat vehicles (WTCV) appropriation include initiatives to improve combat power, particularly in support of NATO. Funding requests for procurement of ammunition include $2.057 billion for end item rounds and $277 million for ammunition production base support. The funding request for items under the "other procurement" appropriation included $1.148 billion for tactical and support vehicles, $2.781 billion for communications and electronics equipment, and $1.434 billion for other support equipment.

Science and Technology

How to allocate budgeted funds for research and development was a major concern of the Army Science Board (ASB), which advises the Secretary of the Army and Chief of Staff on research and development directions and programs, system acquisition policies and procedures, and other matters that are affected by science and engineering. In February 1983, the ASB established the Committee on Chemical and Biological Sensor Technologies to assess the status of chemical and related sensor technologies and their potential utility to the entire chemical warfare defense program. Consistent with this mission, the committee made a number of information gathering trips this year including visits to the Chemical Research and Development Centers, U.S. Army Medical Research and Development Command, U.S. Army Chemical School, U.S. Army Atmospheric Science Laboratory, SRI International, GTE Sylvania, Jet Propulsion Laboratory, and the Lincoln Laboratory. Some of the information gathered focused on the research and development efforts explaining the 6.1 to 6.4 materiel development cycle leading to successful initial

operational capability (IOC), and on the need for and problems in detecting and monitoring chemical warfare agents in operational environments. The committee's final report is due on 10 April 1984. Another ASB subgroup studied ways to improve the Army's decontamination and smoke programs and provide the individual soldier balanced protection. The Army started to implement several key recommendations of the committee.

Another group that advises the Army on science and technology is the Advanced Concepts and Technology (ACT) committee, a high-level group of scientists, engineers, and professional Army officers representing the Office of the Deputy Chief of Staff for Research, Development, and Acquisition (ODCSRDA), ODCSOPS, DARCOM, TRADOC, ODCSPER, and ARI. This committee has responsibility for evaluating unsolicited proposals that possess significant potential to enhance Army effectiveness. During FY 83, ACT funded eighteen different projects conducted by firms under contract signed with the Army's developing commands, for approximately $6.0 million. Areas under investigation included hypergolic combustion, ceramic shield turbine blades, low-cost artillery guidance, soldier data card, a thermal imaging device, near millimeter wave radar, and carbide diesel components.

The Board on Army Science and Technology (BAST) is the third group that advises the Army on science and technology. The National Academy of Sciences and the National Research Council, at the request of the Honorable James R. Ambrose, Under Secretary of the Army, established BAST on 15 February 1982. This year BAST carried out a number of studies in the field of science and technology and planned for several others. The studies undertaken included assessments of chemical warfare (defensive) sensor technologies, the risks associated with either continued storage or disposal of the existing stocks of chemical agents and munitions located at eight sites in CONUS, and the professional environment in Army laboratories, and its effect on scientific and engineering performance. The first two study teams will present their final reports in FY 84. The third study team transmitted its final report, "The Professional Environment in Army Laboratories and Its Effect on Scientific and Engineering Performance," to the Assistant Director of Army Research on 12 August 1983. During FY 83, BAST established panels to write prospectuses for future studies on energetic materials, structural materials, and electronic components.

Several Army research laboratories made progress this year in the field of science and technology. To support engineer troop units, the Coastal Engineering Research Laboratory (CERL)

made a number of improvements this year. It produced a Read Only Memory (ROM) module for the Hewlett Packard programmable calculator and stored, on the ROM, programs designed to enhance the response time and accuracy of military engineers in solving problems in a number of areas. Other improvements included using an engineer model to develop a river-crossing operation simulation; developing and fielding a multiuser pilot test microcomputer to replace the manual system of project scheduling, progress reporting, and accounting; successfully field testing foam flotation prototypes; implementing water conservation, reuse and recycle during the BRIGHT STAR 83 exercises in Egypt, completing evaluating the process energy use at Watervleit Arsenal, New York, and thereby identifying energy conservation opportunities.

The U.S. Army's Cold Regions Research and Engineering Laboratory conducted research in three important areas this year. During November and December 1982, the laboratory tested the influence of the winter environment and smoke obscurants on electrooptical and MM-wave systems at Camp Grayling, Michigan. This year the laboratory also developed a method for testing the mobility of Army vehicle tires on snow and ice, and designed an ice control structure that the Army placed on the Allegheny River near Oil City, Pennsylvania, to control ice jams and floods.

Another Army laboratory active this year was the Army Engineer Topographic Laboratories (ETL), which conducted a wide range of research and development to support combat operations. Notable achievements ranged from a missile guidance component delivered to the Army in the field to innovative research in artificial intelligence and robotics for the Army of the future. Much of ETLs work focused on the emerging requirements for robots to perform in lethal environments and intelligent machines to aid the soldier. ETL also emphasized developing ways to monitor and exploit the airfield environmental tactical advantage. The Corps has termed this program the Airland Battlefield Environment Thrust (ALBE).

The Army engineer Waterways Experiment Station (WES) carried out a successful program in the area of military engineering research and development during FY 83. As executive agent for the ALBE WES published a plan to document work efforts for Congress and other agencies. The plan considered all environmental influences on materiel and systems throughout all phases of development. Areas of significant research included the summarizing of site characteristics and measurement techniques for perimeter sensor selection, dust generation potential in arid regions and its effect on helicopters and self-contained

munitions, and minefield deployment and forest effects on laser, infrared, and radar systems used in detecting vehicular targets. Other significant projects WES undertook included vehicle mobility performance specifications for DOD, including evaluations of performance over difficult terrain, developing a sand grid road system to enable vehicles to negotiate sand beaches during over-the-shore operations; producing the King's Bay Hydraulic Model to aid the Navy in designing their new TRIDENT class submarine base in Georgia; listing the effects of weapons fire on field fortifications; demonstrating liquid explosives for combat engineering; and providing the Defense Nuclear Agency and the Air Force's Ballistic Missile Office with vital research about silo structures, site locations, and explosive instrumentation for the MX missile.

This year the COE also carried out a successful program in the field of civil works research and development. To address problems relating to the deterioration and repair of Corps-operated dams (536) and lock chambers (260), it initiated a repair, evaluation, maintenance, and rehabilitation (REMR) research program, which operates in three areas: evaluating concrete structures, identifying problems affecting such structures, and proposing to alleviate concrete structural problems. The Corps expects the program to run for six years and cost $35 million. In August 1983, Hurricane Alicia provided the first chance to use the technology developed by the Corps' Hurricane Surge Data Collection Work Unit for the measurement of coastal tide surge under actual hurricane conditions. A field team from WES deployed several portable instrument packages near Galveston, Texas, where Alicia came ashore, and thereby assisted the Committee on Natural Disasters to assess the hurricane's damage. Also in the field of civil works the Corps tested a wide-scan sonar that will provide an accurate and comprehensive evaluation of top surface wear on horizontal hydraulic structures such as aprons, sills, lock chamber floors, and stilling basins where rocks and debris may have caused erosion. WES supported prototype testing of two floating breakwaters that will provide a lower cost alternative to fixed breakwaters, or as a quick means of constructing temporary harbors for logistical purposes.

Ballistic Missile Defense

President Reagan's keen desire to modernize U.S. strategic defense and efforts to define how to implement this modernization continued, in FY 83, to focus attention on the Army's (BMD) research and development effort conducted by the BMD Organization (BMDO). BMDO, a field operating agency of the CSA, was

located in Huntsville, Alabama, with a BMD Program Office in the Washington, D.C., area.

A presidential commission established to review the strategic modernization program and to find an acceptable basing mode for the Air Force MX intercontinental ballistic missile (ICBM), which the president renamed Peacekeeper, recommended in March 1983 that the U.S. House Peacekeeper in existing Minuteman silos and continue vigorous research and development of BMD. Then, on 23 March, the president reaffirmed his desire for strategic modernization and directed completion of a comprehensive and intensive effort by October 1983 "to define a long-term research and development program to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles." To conceptualize the program, which would be named the Strategic Defense Initiative (SDI) by year's end, the Secretary of Defense appointed a Defense Technologies Executive Committee consisting of a Defensive Technologies Study Team subgroup, and a Future Security Strategy Study subgroup. Both looked to the BMDO and its contractors for input and support. Several members from the organization served full time on the panels for these committees, while others briefed the panels on various aspects of the BMD effort.

Guided by the president's strategic initiatives, which were implemented by National Security Decision Directives 69 and 83 and which were taken into account the action of Congress in deleting deployment funding in FY 83, DOD, the Army Secretariat, and BMDO management restructured the BMD program. The restructured program de-emphasized work in support of a potential near-term deployment decision, but maintained a deployment hedge option and increased emphasis on improving technology that could support a full range of missions in the future. Funds, which resulted from the termination of the SENTRY interceptor development effort, along with increased funding of $57 million over that budgeted for FY 82, permitted the Army to expand its efforts in optical tracking, nonnuclear kill (NNK) techniques, exoatmospheric defense, and continued development of selected critical components of SENTRY system hardware and software.

The FY 83 efforts were manifested in two ongoing programs: the BMD Advanced Technology Center's (BMDATC) Advanced Technology Program, and the Ballistic Missile Defense Systems Command's (BMDSCOM) Systems Technology Program. BMDSCOM continued to operate Kwajalein Missile Range in support of the above BMD programs, supported Air Force strategic offensive weapons testing, and collected data in support of the DOD intelligence community.

In the Advanced Technology Program, BMDATC performed research and development on technologies supporting improvement in near-term BMD and preventing technological surprise by an adversary. The center emphasized technology for advanced defensive systems in all operating regimes: boost phase, post-boost phase, the exoatmospheric/high endoatmospheric or mid-course phase, and the endoatmospheric or terminal phase.

The Army more than doubled the program budget for BMDATC's Endoatmospheric NNK program, permitting new initiatives and accomplishments in the areas of warheads, radomes, and controls. It successfully demonstrated destruction of full-scale, threat-type reentry vehicles through two hypersonic sled tests of a full-scale NNK focused warhead. Component tests of control thrusters demonstrated dramatic improvement in throttling capability and fast response times. It also started validation of flyable brassboard controls. BMDATC initiated development on a cooled metallic radome concept and development of high density silicon nitride material for radomes. Plans and preparations began for subscale radome testing. A millimeter wave (MMW) instrumentation radar installed at the Kwajalein Missile Range obtained limited reentry vehicle signature data. BMDATC developed a breadboard model of conformal array MMW and made it ready for testing in 1984. BMDATC also initiated and completed preliminary design review of a Small Radar Homing Interceptor Technology flight experiment to demonstrate achievable small miss distance against both fixed and ballistic moving targets. In response to the president's SDI, BMD management began, late in FY 83, to realign the Endoatmospheric NNK program to shift emphasis from low endoatmospheric to high endoatmospheric defense.

In an electromagnetic accelerator program, BMDATC explored the application of electrical energy as an alternative to chemical-reaction powered guns and missiles to provide nonnuclear kinetic energy kill capability for BMD purposes. BMDATC initiated technology analysis and subsystem/component design and development efforts for several concepts and plans for a ground test-bed to validate applicable electromagnetic accelerator technologies. Besides the above, BMDATC continued to develop and extend the technology base for advanced BMD and made progress particularly in the development of distributed data processing technology.

In the Systems Technology Program, BMDSCOM continued research and development of BMD systems options. The restructuring of the BMD program to de-emphasize an early deployment capability provided opportunities to more efficiently integrate and validate maturing technologies into evolving system

concepts that the Army could deploy should it deem a defensive system necessary.

BMDSCOM also continued development of SENTRY related technology other than that for the interceptor. These efforts produced a number of achievements in the development of a state-of-the-art radar, data processing hardware and software, and guidance and control systems and in the definition of deployment and command, control, communications, and intelligence (C^3I) requirements for terminal defense application in a layered defense system. The signature measurement radar, at the Kwajalein Missile Range, and a shipborne COBRA JUDY radar collected dedicated target data from mission twenty-two in the Systems Technology Reentry Experiment Program. BMDSCOM completed pitch and yaw engine test on the SENTRY Jet Interaction Control System, as well as initial propulsion test vehicle static firings, including a motor plume test. They also completed the radar antenna design and tested a prototype in a simulated nuclear environment.

BMDSCOM completed phase I of an Airborne Optical Adjunct (AOA) study that it had begun in 1982. The phase I effort identified the utility and need for an AOA system, defined system requirements for an aircraft-mounted optical sensor that the Army could use to augment other sensors in a BMD system in the search and acquisition of threatening missile warheads, established critical development issues, and completed an AOA demonstration program plan. BMDSCOM then modified the plan to incorporate suggestions from Army management, the ASB, and experts from private organizations. In phase II, which began in March 1983, the command used the plan in formulating, specifying, and writing the scope of work and technical requirements for the Request for Proposal.

In another effort to define systems, BMDSCOM determined effective combinations of BMD and passive defense measures for use in the protection of urban industrial and military targets and assessed the impact of the introduction of passive defense measures on BMD requirements. Systems definition also continued on BMD concepts for the 1990s with separate contract efforts relating to Sea Launched BMD, High Value Target defense, and ICBM defense. Another contract, initiated in February 1983, involved incorporating results of previous BMD/90s concepts to update an existing baseline design into a defense system capable of defending a broad set of targets.

BMDSCOM's System Technology Project Office continued to determine and publish threat projections for BMD studies. A special effort involving research of Soviet countermeasures produced a five-year Countermeasure Plan. A Threat-Specific program,

which began in June 1982, provided continuity to consideration of nonconventional BMD concepts, ranked candidate Threat-Specific Systems, and proposed further development of concepts that demonstrate real potential for BMD application. An Attack Working Group, chartered to define realistic attacks on U.S. targets and to identify those which could be defended by various BMD systems, concentrated on Soviet attack capabilities on closely speed basing (CSB) deployments for Peacekeeper, attack laydowns, and scenarios the AOA.

During the year, BMDSCOM initiated a BMD road map project to identify alternatives for the Systems Technology Program and to provide priorities for the alternatives. The effort involved top-level assessment of BMD missions, strategic threat, potential attack scenarios, technology maturity and availability, strategies environment, and political factors such as treaty considerations, public opinion, and allied concerns. BMDSCOM has provided data from this effort to the DOD for use in the Strategic Defense In-depth study. During the last six months of this fiscal year, the command performed studies identifying BMD technology applicable to antitactical missiles in support of an antitactical missile analyses effort being performed by the Army Missile Command.

In October 1982, the U.S. and the Republic of the Marshall Islands completed negotiation for a new Interim Use Agreement regarding present and future use of the Kwajalein Missile Range. The agreement allows for continued operation of the range through FY 85 or until the Compact of Free Association comes into effect ending the trusteeship the U.S. has exercised over Micronesia since 1947. In September 1983, the Republic of the Marshall Islands signed the compact, which both houses of Congress must approve. Throughout the year, the Kwajalein Missile Range provided technical and logistical support of on-site BMD research and development programs and continued operations supporting national strategic offensive and defensive weapons testing. The range participated in eighteen major U.S. launched missions, including that of the first Peacekeeper launched from Vandenberg Air Force Base in California. In addition, the range supported four NASA Space Transportation System flights.

Development

To protect its future, this fiscal year the Army continued to support research and development in such areas as Command, Control, and Surveillance; Combat Support; Munitions; Aviation; Missiles and Air Defense; and Ground Combat Systems.

To improve Command, Control, and Surveillance, the Army participated in the Joint Tactical Communications program,

known as TRI–TAC this year. In March 1983, the Army successfully fielded and evaluated the AN/TYC–39 automatic message switch and began integrating it into the European tactical communication system; six months later the first AN/TCC–39 automatic circuit switches was delivered to Fort Hood. Fielding of these major TRI–TAC switches will provide our tactical force with secure, reliable transmission of tactical command and control data, voice and message communications. Also in January 1983, the Army executed the second year of the three-year multiyear contract with Raytheon for digital multiplexers, modems, and cable drivers for use in transmission equipment and cable systems. The Army expects initial deliveries in May 1984. Development continued on the Single Subscriber Terminal (an intelligent terminal used for message preparation and reception) and the Improved Message Facility (a product improvement of existing Army tactical message centers), both of which are scheduled for testing and production decisions during FY 84. Also, at the end of the fiscal year, the Army initiated a study of all battlefield communications systems. This study has the potential for causing major changes in the TRI–TAC program.

Also in the area of communications, this fiscal year the Army continued with the development of the Tactical Satellite Communications (TACSATCOM) program, which is primarily aimed at fulfilling the Army's responsibilities in the Ground Mobile Forces Satellite Communications (GMFSC) program. TACSATCOM's development centered on improving resistance to electronic jamming and overall systems survivability, on completing the engineering for the new antijam control modem, which the Army will install in the new multichannel satellite communications terminals. The Army also completed advanced development of the new Single Channel Objective Tactical Terminal (SCOTT), which provides field commanders from brigade to field army a uniquely survivable command and control capability. Also, this year the Army deployed sixty-nine Special Communication Systems (SCS) satellite terminals to Europe, eight multichannel satellite communications terminals to the Signal Center and school for training, and completed first article tests on the new single channel man-pack satellite terminals that Special Operations Command will use.

Early in FY 83, the Single Channel Ground and Airborne Radio System (SINCGARS) began limited testing of radios from two competing contractors, International Telephone & Telegraph (ITT) and Cincinnati Electronics. In December 1982, the Army required the contractors to bid on a fixed delivery schedule for 28,100 radios over a four-year period on both a single year and a multiyear basis. On 29 July 1983, the source selection board

announced that ITT was the winner of the four-year contract. ITT will provide 28,100 radios at a cost of $262 million. The Army was unable to award the contract in FY 83, since the House Appropriations Committee still had to approve the multiyear request. Also, in April 1983, the Army and Air Force agreed to let the Army (PM [Production Manager] SINCGARS) be responsible for the development of a SINCGARS compatible aircraft radio. The 2d Armored Division, Fort Hood, Texas, will be the first troop unit to receive SINCGARS radios.

During late FY 82 and early FY 83 the Army's JTFP developed an evolutionary acquisition strategy for the ASAS program, to include the Air Force and their Enemy Situation Correlation Element (ENSCE). During this fiscal year, the JTFP accelerated the fielding of the system. After the Army approved the ASAS/ENSCE outline program plan in February 1983 and Congress released FY 83 funds for it, the JTFP contracted with the California Institute of Technology's Jet Propulsion Laboratory, through an existing contract with the NASA, to be the system implementation engineer. Then, the Army completed a draft baseline functional capabilities document and initiated preliminary design work for the system. The JTFP also executed memorandums of understanding for program coordination with tactical simulation (TACSIM), the Technical Control and Analysis Center (TCAC), and elements of the Battlefield Exploitation and Target Acquisition (BETA) project. The evolutionary concept of development will provide six baseline systems (5 ASAS/1 ENSCE) beginning in the mid-1980s, followed by a preplanned product improvement phase leading to the fielding of an ASAS/ENSCE system beginning in the late 1980s. Development of the ASAS/ENSCE system beginning in the late 1980s. Development of the ASAS/ENCSE will exploit lessons learned through feedback from baseline systems and other related field systems.

During FY 83 the Army continued to develop the Defense Satellite Communications System (DSCS) (satellite communications ground equipment) for all DOD services and agencies. (The Air Force develops and launches the space system, and the Navy develops systems unique to Navy requirements). The major thrust this year has been continued improvement to the worldwide system, including updating network control and terminal transmission power control, and replacing old equipment. This year the Army fielded the following equipment: ten interconnect units, which allow better interaction with terrestrial systems, four new medium satellite terminals, as well as two Satellite Communications Control Elements (SCCE), which are essential to control the new DSCS III satellite system.

This fiscal year the Army also continued to develop the Advanced Field Artillery Tactical Data System (AFATDS). The first step in the program, the communications control system, remained in advanced development, while the second step, the design of the Fire Support Terminal and Fire Support System (FST/FSS) and the associated brigade and battalion software, prepared for entrance into advanced development. In anticipation, the program manager issued a request for proposals to industry in May 1983. By the end of the fiscal year, he had received and was evaluating the proposals.

During FY 83 the Mortar Locating Radar–AN/TPQ–36 (Firefinder) program focused on worldwide fielding of the systems, completion of first article testing, and deployment of two systems to Lebanon in support of the Marine peacekeeping force. The Army deployed a total of 27 radars during the fiscal year—7 within CONUS, 15 to USAREUR, 3 to Korea and 2 sent to Lebanon. In July 1983, the Army completed the latest series of first article tests, which measured electrical performance, ruggedness, transportability, susceptability to electromagnetic interference and performance under extreme environmental conditions. Test results demonstrated a significant improvement in system availability and better system performance under conditions of high humidity. In July and August, the Army assembled a Field Artillery Surveillance and Target Acquisition Battery (FASTAB) from two AN/TPQ–36 radars and a select group of operators from the instructor cadre at Fort Sill, Oklahoma, to support the Marine forces deployed in Lebanon. Reports indicate that the systems have performed well and were reliable.

The Artillery Locating Radar–AN/TPQ–37, the other version of the Firefinder program, also received attention this year. The Army provided USAREUR with six systems and Korea with two. In the second quarter of FY 83, the Army completed reliability and environmental testing of artillery locating radars, encorporating numerous improvements. Tests results indicated better system performance in conditions of high humidity and extreme temperatures, but some susceptability to rain, electromagnetic interference and vibration. The Army initiated measures to correct these problems.

The Army's fielding of the TACFIRE continued on schedule this year, with approximately 60 percent of the force presently equipped with TACFIRE. The Army expects to complete fielding of the system in the second quarter of FY 87.

During FY 83, the Army also fully supported continued development of the Position Locating Reporting System (PLRS). In July 1983, following a congressionally approved Army

reprogramming action, the Army and Marine Corps entered into a four-year production contract for PLRS with Hughes Aircraft Company. This contract will result in initial system fieldings for both services in 1986. In preparation for production, the PLRS RDTE program completed a Reliability, Availability, and Maintainability (RAM) study begun in FY 82. This effort indicated production readiness and corrected RAM deficiencies noted during earlier developmental and operational testing. In addition, the PLRS engineering development system completed refurbishing in September 1983, in preparation for field redeployment in FY 84. Redeployment will provide the Army and Marine Corps with additional electronic warfare and propagation evaluations for doctrine and concept refinement. To support the program, the Army awarded several integrated logistic support development contracts for training aids and devices (TADS), test requirement documents and test program sets (TRD/TIPS), as well as a direct support team vehicle (DSTV) for field maintenance repair.

During FY 83 the Army continued the contract with Singer Librascope for development of a Tactical Display System prototype (large screen plasma displays) and associated software for purposes of experimentation and demonstration. The displays will come in two sizes: a Singer manufactured 43-cm. × 43-cm. model and a Magnavox built 60-cm. × 80-cm. display. Singer developed software for Maneuver Control System (MCS) hardware will drive the displays. The Army expects to receive three models of each size for demonstration during the Command and Control System Program review in FY 84. Subsequently, the program will conclude with limited experimentation, possibly in Europe for VII Corps, using the displays integrated with existing MCS equipment.

Failure to authorize funding for the Ground Laser Locator Designator (GLLD) in FY 83 prevented the Army from executing an option in the FY 82 contract for procurement of units this fiscal year. The Army received the final shipment of prior procurements of the GLLD in December 1982 and the first production units of the Fire Support Team Vehicle (FISTV) laser designator, range finder modification kits in August 1983. During the fiscal year, the Army fielded GLLD units in CONUS, sending them to the 24th Mechanized Infantry Division at Fort Stewart, Georgia, in November 1982; the 9th Infantry Division, Fort Lewis, Washington, in March 1983; and the 48th Infantry Brigade, Fort Lewis, Washington, in August 1983. The Army's Development and Employment Agency (ADEA) mounted the GLLD on the Fast Attack Vehicle at Fort Lewis, Washington. Tracking data from the GLLD indicated that laser terminal homing munition can track and designate stationary targets out to two

kilometers, with sufficient accuracy to provide a high degree of probability of hit.

During FY 83 the Joint Program Committee funded several studies dealing with the development of a Joint Surveillance and Target Attack Radar System, called JOINT STARS for the Air Force and Army. In August 1983, the Test Planning Working Group met to plan for the JOINT STARS test and to review the draft Test and Evaluation Master Plan (TEMP). One month later, the JOINT STARS Source Selection Advisory Committee held its first meeting at which they approved screening criteria used to determine potential bidders on JOINT STARS, and a General Officer panel of Army and Air Force users and developers, met for two weeks to review the JOINT STARS requirements. As a result of the recommendations from this panel, the Army and Air Force developed an acquisition strategy that accomplishes the goals of the program in a block or phased approach, starting with a baseline system and proceeding to a full capability system.

As for night vision devices, production continued on Man-portable Common Thermal Night Sights (MCTNS), AN/TAS–4 (TOW Night Sight), AN/TAS–5 (Dragon Night Sight), and AN/TAS–6 (Night Observation Device Long Range). Production of AN/TAS–4A (Improved TOW Night Sight) and closed cycle cooler kits began in the second quarter of FY 83. The Army awarded a contract to Texas Instruments, Inc., for production of AN/TAS–A conversion kits, as part of the procurement of TOW 2 (Improved TOW Weapon System) launcher kits. Fielding of the AN/TAS–4A began in USAREUR as part of the TOW 2 deployment. Production of AN/PVS–5A, second generation night vision goggles, continued in order to maintain a warm production base, while the Army phases third generation devices into production. Engineering development for the third generation night vision goggles, AN/PVS–7, for use by all soldiers, continued, while the Army completed advanced development work on a Driver's Thermal Viewer (a common module based periscope) for drivers of the M1 tank and M2/M3 combat vehicles. The Army also awarded a contract to Litton Industries for the third generation Aviator's Night Vision Imaging System (ANVIS), AN/AVS–6.

Full scale development of the Remotely Piloted Vehicle (RPV) continued in FY 83 with completion of critical design reviews and the major portion of qualification tests. Lockheed Missile and Space Corporation (LMSC), which is the prime contractor, began integrating the Modular Integrated Communications and Navigation System (MICNS). It trained twenty soldiers to operate the system in preparation for early concept testing at Fort Hood, Texas, in FY 84. In preparation for resumption of flight tests that same year, the Army conducted manned aircraft flights.

Advanced development of a forward looking infrared (FLIR) navigational system to enable the RPV to fly at night and under adverse weather conditions also continued. On 6 June 1983, the ASARC approved the consolidation of the launch and recovery assets in the division and provided for small sections in the brigade areas. It also reduced the number of air vehicles to be procured from 995 to 548.

During FY 83, the Army began producing the Improved High Frequency Radio (IHFR) for all Army units that presently use the AN/CRC–106 (1950 technology). The improved radio provides an interim antijamming (AJ) joint capability, Electromagnetic Pulse (detection) (EMP) and selected adaptive features. Depending on favorable funding levels, the Army hopes to provide the basic IHFR to the field by FY 87 and the advanced radio with the AJ/EMP and selected adaptive features by FY 89.

Combat support equipment played an important role in the Army's development activities this year as well. During FY 83, the M712 Copperhead Cannon Launched Guided Projectile demonstrated better than 80 percent reliability in monthly Lot Acceptance Tests at White Sands Missile Range, New Mexico. This performance surpassed the OSD reliability standard of 80 percent and ensured a better than acceptable kill probability against stationary and moving hard point targets, such as, tanks, infantry fighting vehicles, and self-propelled artillery. Hence, the Army reinstated the program, which it had earlier dropped because of rising costs and unproven reliability, and chose to procure 30,946 rounds. Also, the Army submitted, and Congress approved, a FY 83 reprogramming budget of $55.0 million and a FY 84 budget request of $75.0 million to continue production after the FY 82 funded delivery period. By September 1983, the Army had received more than 4,000 of the Copperhead projectiles since production deliveries had begun in October 1981.

On 8 November 1982, the Army awarded a contract for Low Rate Initial Production (LRIP) of fifteen M9 armored combat earthmovers (ACE), a highly mobile earthmoving vehicle designed for forward-area combat support, to Pacific Car and Foundry Company (PACCAR) of Renton, Washington. The Army plans to award a five-year multiyear contract in FY 84.

During FY 83 the Army also placed competitive procurements for Ground Emplaced Mine Scattering System (GEMSS) mines and dispensers, which resulted in an expansion of the industrial production base for these items. The Lockheed Corporation won the contract for the third competitive procurement and will produce bodies for the M74 antipersonnel mine and the electronics for the M75 antitank mine. The Army awarded a contract to Quantic Industries for production of safe arming

devices for both mines based on options contained in the FY 82 contract. The Army suspended the FY 83 contract with D & S Corporation for dispensers, due to problems in acquiring chassis. The FY 83 dispenser production requirement will be combined with the FY 84 buy. System testing and improvement continued this year, with six dispensers from the initial procurement passing First Article and Production tests. EMCO, the second producer for M74 AP (antipersonnel) mine triplines, passed First Article tests this fiscal year; as did the Aerojet-General Corporation on their M75 AT (antitank) mine contract. FY 83 also saw completion of the First Lot Acceptance Testing for the M75 mine. Using findings from initial production and follow-on tests and evaluations, the Army continues to upgrade operations and maintenance manuals for the GEMSS Integrated Logistics System (ILS).

In FY 83, the High Mobility Multipurpose Wheeled Vehicle (HMMWV) program completed development and operational testing of contractor vehicles. Testing of these prototypes from General Motors (GM) Land Systems Division, American (AM) General Corporation, and Teledyne Continental Motors was extensive with results indicating that all vehicles had the potential to satisfy the tri-service requirements. On 22 March 1983, the Army awarded a five-year multiyear production contract to AM General. The HMMWV, a light, highly mobile vehicle employing application kits to satisfy various joint service vehicle roles, was Type Classified Standard Army equipment this fiscal year. Also this year extensive joint logistics analysis, including coordination between all involved government agencies, has resulted in the development of an outstanding test program designed to verify the quality of the production vehicles.

The Army relied on AM General Corporation for part of its tactical truck program as well. FY 83 was the third year of two five-year multiyear contracts for truck production. One was with the AM General Corporation for the 5-ton truck and the other with the Oshkosh Truck Corporation for the 10-ton truck. Deliveries on the 5-ton trucks began only this year, while deliveries of the 10-ton trucks continued from last year in support of the European deployment of Pershing II and GLCMs. Initial deliveries of the 10-ton heavy expanded mobility tactical truck (HEMTT) began in FY 83 in support of the fielding of the MLRS and Patriot systems. This year the Army continued the four-year multiyear contract with General Motors Corporation for more than 53,000 commercial utility and cargo vehicles (CUCV), which complement the HMMWV. Delivery of the vehicles began this fiscal year. Other significant accomplishments in the tactical truck program included the publication of the internal wheeled

vehicle master plan and the first tactical wheeled vehicle Army functional review, both in September 1983. Other acquisitions included the awarding of a production contract, on 11 March 1983, to Hagglund Soner of Sweden for the small unit support vehicle (SUSV), and the procurement of numerous trailers.

The Army's development activities progressed in the area of munitions as well. The Army continued procurement tests of the M753 Improved 8-inch Nuclear Projectile. After conducting tests to determine the need for a special electromagnetic radiation (EMR) facility to provide additional shielding during limited life component (LLC) operations, the Army also completed support equipment fielding for all commands, less the reserve components, but initiated a materiel fielding plan (MFP) for the reserve components with the National Guard Bureau, the Army Reserve, Headquarters FORSCOM and the Army Project Manager for Nuclear Munitions (PM–NUC). The Army expects MFP ratification in FY 84.

The Army discontinued the development of the XM785 Improved 155-mm. Nuclear Projectile this fiscal year, due to congressional termination of the program during its deliberations on the FY 84 DOD authorization bill. The Army staff and the PM–NUC began to develop plans for program termination and for readdressing this program with Congress during hearings on the FY 85 budget.

During FY 83, the Army undertook numerous exploratory development activities on binary chemical agents, munitions materials, and prototype weapon design. Studies led to initiatives to find new binary agents or methods of defeating protective ensembles and equipment, significant gains in documenting increased reliability of agents, and investigations for new or improved binary submunitions applicable to the JTACMS chemical warhead. FY 83 also saw the advanced development program for the MLRS suspended as a result of elimination of fiscal year funds by the Joint Appropriations Committee. However, the Army was able to prepare for initial flight tests of prototype simulant filled warheads and to do limited work on a fuze system with fiscal year 1982 funds. Engineering support continued this fiscal year to the Navy in the development of the BLU–80/B BIGEYE bomb. Principal efforts consisted of toxic agent and simulant chamber testing on the full scale instrumented bomb and reactor to ascertain the parameters of the binary agent reaction at various temperatures. Army engineers also conducted options studies for facilities to manufacture QL (Ethyl 2-(Diisopropylamino) ethylmethylphosphonite [Army symbol]) for the BIGEYE bomb and for a commercial facility to manufacture dichloro (DC) for the M687 155-mm. Projectile.

In the area of aviation, the Army concentrated this fiscal year on development of the AH–64 Apache advanced attack helicopter, the AH–1S Cobra/TOW, the UH–60A Black Hawk, the CH–47 Modernization program (CH–47D), the Advanced Army helicopter improvement program, the C–12 cargo plane, the joint advanced vertical lift aircraft (JVX), and the light helicopter family.

During FY 83, the Army continued production of the AH–64 helicopter by awarding contracts to Hughes Helicopters, Inc., for airframes, Martin Marietta for a target acquisition designation system and pilot night vision sensors (TADS/PNVS), and General Electric for engine service for the attack helicopter. In January 1983, the final assembly line for the helicopter opened at Mesa, Arizona. Here vendors and subcontractors from all over the United States deliver Apache components for final assembly, integration, test, and acceptance. The fielding of the Apache moved forward this fiscal year when TRADOC distributed the draft Materiel Fielding Plan, and the Army awarded Northrop Corporation a contract to test four PNVS surrogate trainers at Fort Rucker, Alabama, enabling pilots to engage in early night vision training in the AH–1 before switching to the AH–64.

On 6 March 1983, HQDA elected not to proceed with the Cobra 2000 program, which would have been a four-bladed variant of the AH–1S. It based this decision on the age of the Cobra fleet, and projected fielding plans for the AH–64 and light helicopter experimental (LHX) aircraft. In May 1983, HQDA implemented the Cobra Fleet Life Extension (C-FLEX) program designed to keep the Cobra fleet flying safely and reliably until the aircraft were naturally attrited through old age. In addition, eighty-seven of the AH–IG helicopters were to receive TOW missile wiring and mounting points. During the summer of 1983, the Cobra program manager developed a low cost FLIR sensor (C–NITE), which will allow the Cobra crew to acquire and engage targets at night and under smoky conditions, adding significantly to its battlefield capability. The Army National Guard received twenty-three of the forty-four fully modernized Cobras delivered during the year.

As for the UH–60 Black Hawk helicopter, the Army completed fielding of the aircraft to USAREUR this fiscal year, and provided the U.S. Customs service with one on loan and two each for the Army National Guard and Army Reserve Cummulative deliveries of the helicopter, as of the end of FY 83, equaled 434, with the Air Force receiving eleven. The Army also completed the development of the External Stores Support System (ESSS), which allows a Black Hawk equipped with ESSS to fly at least 1,355 nautical miles (NM) nonstop and have 1,000 lbs of fuel

remaining upon landing. The Army accomplished production cut-in of the ESSS hard points in June 1983. In August 1983, the U.S. government approved continued acceptance of the Black Hawk at a rate of ten per month through the remainder of the 1982–84 contract period.

This fiscal year the CH–47 Modernization program entered its third year, with the Army contracting for the conversion of fifty-two aircraft into the much improved CH–47D configuration. The Army delivered the first production aircraft to the IOC unit on 28 February 1983, and it expects the aircraft to attain IOC in February 1984. Deliveries have remained on schedule and performance has met or exceeded all design requirements. Also negotiations are underway for the four-year production contract and for a potential five-year multiyear procurement (FY 85–FY 89) for 240 airframes.

FY 83 was the second year of Full-Scale Development (FSD) for the Army Helicopter Improvement Program (AHIP) under a fixed-price incentive contract with Bell Helicopter Textron, Inc., of Fort Worth, Texas. The objective of this program is to produce an improved scout helicopter capable of day, night, and adverse weather operations through the modification of 578 OH–58A observation helicopters to an OH–58D scout configuration. Besides improvements to the engine, rotor, drive train, cockpit, and avionics, the AHIP scout will feature television, thermal imaging, and laser sensors encapsulated in a Mast Mounted Sight above the helicopter main rotor. The Critical Design Review for AHIP, held in November 1982, was successful and the program proceeded to produce five prototype aircraft and seven functional prototypes of the Mast Mounted Sight. After constructing and testing subsystems and completing Federal Aviation Authority (FAA) certification of the engine, Bell Helicopter began flight testing the AHIP engine, transmission, and rotor systems on one of its own aircraft in March 1983. On 1 September the aircraft company started initial flight testing of a prototype OH–58D helicopter. A pilot flew the basic aircraft configuration, without the Mast Mounted Sight on 1 and 2 September, and the aircraft with a Mast Mounted Sight on 8 September 1983. Based on an assessment of the test results and reasonable program maturity, including program cost, the Army In-Process Review (IPR) members recommended and received approval to contract for the required AHIP Long Lead Time (LLT) and advanced procurement items. The Army awarded contracts to Bell Helicopter and The Allison Gas Turbine Operations of Indianapolis, Indiana, for the airframe components and engines. The Army also conducted Initial Production Readiness Reviews (IPRR) for the AHIP at Bell Helicopter and five subcontractors during FY 83.

By contrast the JVX Development program suffered a major set back this fiscal year when the Army withdrew from the program. A major reason was the lack of a well-defined special electronic intelligence mission SEMA and the associated mission equipment package for the JVX design specifications, which increased program risks, costs, and affordability. In the early 1990s, the Army plans to conduct operational evaluations of the Marine Corps medium lift version to determine if the JVX is a solution to future medium lift requirements and intends to procure JVX only for those missions that prove to be cost effective.

Another aspect of Army aviation this fiscal year was the continued interest in developing the LHX family. The need for the LHX first surfaced in January 1982 when the Army completed an Aviation Mission Area Analysis. This analysis identified fifty-six deficiencies in the current fleets of OH–58, OH–6, UH–1, and AH–1 helicopters, concluded that these fleets would be unsupportable and nonsurvivable on future battlefields, and recommended that an LHX fleet replace them. The Army Systems Program Review of 24–25 March 1982 agreed. Consequently, in February 1983, the Army Aviation Modernization Plan recognized the LHX as an essential element in the modernization of the Army's light helicopter fleet. Deployment of the LHX will replace eleven existing helicopter models with two LHX models and will significantly reduce supportability costs and correct tactical and logistical deficiencies of the light helicopter fleet. In 1983, the Army initiated studies to determine the optimum LHX configuration, which could be a conventional helicopter, a winged helicopter, a helicopter with coaxial rotors, or a tilt-rotor aircraft. The studies included developer (DARCOM–AVSCOM [Aviation Systems Command]) trade-off determination studies to determine the most viable technical alternatives; user (TRADOC-Army Aviation Center) trade-off analysis to determine system requirements for optimum mission effectiveness; and an independent study by an ASB Ad Hoc Subgroup to assess LHX issues. In 1984 the Army will use the study results to select the LHX configuration and settle related issues.

Missiles and air defense continued to play important roles in the Army's modernization program this fiscal year. For example, the Hellfire Missile System (HMMS), an evolutionary system to accommodate a family of terminal homing seekers placed on a common airframe, remained in production, with the continued development of the minimum smoke motor (designed to reduce the Hellfire motor smoke signature) and the improved missile autopilot. Both of these improvements are scheduled for completion in FY 84. The Army awarded the second year (FY 83) production contract for 3,971 missiles, and issued the request for

a contract proposal for next fiscal year. In June 1983, an Israeli Air Force pilot fired a Hellfire missile from an AH–64 during desert testing in Israel and substantially damaged the target tank, while, in September 1983, a British Army Lynx helicopter fired two missiles, which directly hit the target.

FY 83 funding of the MLRS, which furnishes direct support to front line units, provided for continued design improvements and low rate production, including procurement of 23,640 tactical rockets and 72 Self-Propelled Launcher Loaders (SPLLS). Vought Corporation delivered 2,916 tactical rockets and 47 SPLLS to the government from its Camden, Arkansas production facility, bringing total deliveries of each 3,684 and 54, respectively. During FY 83 the MLRS was Type Classified Standard and the Army made a decision to begin full-scale production. Congressional approval in the FY 83 budget for multiyear procurement of the MLRS paved the way for the award of a five-year multiyear contract to Vought Corporation on 15 September 1983. The MLRS multiyear procurement strategy will result in $209.1 million in savings compared to annual procurement. Fielding of the first MLRS batteries in both CONUS and USAREUR started in FY 83, as well, with the 1st Infantry Division at Fort Riley, Kansas, in March, and with the 8th Infantry Division in Germany in September, respectively. Four participating governments, the United States, United Kingdom, Germany, and France, analyzed six international contractor team studies for a Terminal Guidance Warhead (TGW) for the MLRS and selected a horizontally gliding, terminally guided submunition (TGSM) concept with a millimeter wave (MMW) seeker as the best technical approach (BTA). The participating governments incorporated this approach into a multinational request for proposal and released it to industry for their perusal on 15 August 1983. Formal release of the proposal request is planned for early 1984. Negotiation with partners on the memorandum of understanding procurement supplement, which will establish procedures for European production and/or procurement, and third country sales continued. European governments began evaluating proposals from their industries for European production based upon the final technical data they received during the year for the MLRS. Initial indications were that they would contract for European development during 1984. The Army suspended the planned FY 83 advance development of a binary chemical warhead for the MLRS due to the Joint Appropriations Committee deleting the requested funding. However, the Army continued limited flight test preparation, previously planned for FY 82, using that year's unexpended funds. It plans to resume advance development in FY 84.

FY 83 was the fourth year of production for the Patriot air defense system, the Army's all-weather, long-range, surface-to-air missile system. This fiscal year the Army awarded a contract for 12 fire units and 287 missiles, making a total of 31 fire units and 710 missiles under contract out of a planned program of 106 fire units and 6,492 missiles. The first Patriot battalion, 1st Battalion 43d Air Defense Artillery, completed its training at Fort Bliss and achieved its initial operational capability in CONUS. The organization will remain at Fort Bliss to train subsequent battalions. Meanwhile, between May and July 1983, the Army conducted the last of four tests directed by the Defense System Acquisition Review Council to demonstrate that the system was ready to field. When the tests revealed shortfalls in hardware reliability, training, and supportability, the Army terminated testing and placed the program on a schedule to allow for corrections and their testing. As a result of this redirection, deployment of the system to Europe slipped at least six months from April to October 1984. In April 1983, the Army terminated the NATO Acquisition Study Effort for the Patriot when the nations involved could not reach a common agreement on acquisition strategy, schedules, and funding. The Netherlands, Greece, and Germany continued initiatives for a bilateral program with the United States. The government of Japan completed a study in January 1983 of Patriot as a replacement for their Nike-Hercules and Basic Hawk systems. The Army expects a Japanese decision to acquire the system in 1984.

In January 1983, a Department of the Army General Officer Review made the decision to support a viable U.S. Roland battalion to the year 2000 and directed the Project Office to review program costs and make reductions where possible. On 20 June 1983, a General Officer Special IPR made the decision to continue fielding the U.S. Roland and directed the Roland Project Office to reduce costs further. Meanwhile, throughout this fiscal year, the Roland Deployment Readiness Verification Test (DRVT) phase I assessed its readiness for deployment. When the early part of the test revealed that the hardware was not mature enough to warrant its deployment, the Army decided to begin correcting the deficiencies in January 1984 and to conduct a DRVT phase II, confirming correction of these deficiencies and reassessing Roland's readiness for deployment. The first U.S. Roland Operational Demonstration, conducted at White Sands Missile Range, New Mexico, from 17 to 30 August 1983, resulted in three successful firing missions.

The production of FLIR Night Sights for the Army's short-range air defense missile system, the Chaparral, continued with

the award of a contract for fifteen FLIRs in May 1983 and for twenty-six FLIRs in September 1983. The FLIR will provide the Chaparral gunner with improved night and adverse weather acquisition capability. Initial delivery of FLIRs, contracted for in FY 82, began in August 1983; delivery of the Repair Cycle Floats (RCF) contracted for in FY 81 began delivery in August 1983 as well. Also that month, the Army approved limited production of the towed Chaparral for the 9th Infantry Division, because the self-propelled Chaparral is too heavy in terms of strategic airlift requirments for use with light divisions. The towed system, on the other hand, weighs 12,000 pounds and has a 100 percent system commonality with the self-propelled Chaparral. A single C–141 stretched aircraft can carry four towed systems and one prime mover.

Also for the Chaparral air defense system, this year the Army initiated development of NBC protection modification and the weapon display unit in February 1983, the FLIR counter-countermeasure in May 1983 and continued development of the Rosette Scan Seeker (RSS). The NBC protection modification will provide crew protection for operation in an NBC environment. The weapon display unit will provide the gunner target alerting and cueing information from the Short Range Air Defense Command and Control System. The FLIR counter-countermeasure will provide electrooptical countermeasure hardening for the FLIR. The RSS missile, will provide an improved infrared counter-countermeasure and increased range capability.

As for the Hawk missile system, which provides large area coverage for air bases and facilities in NATOs rear areas, the Army continues to concentrate on increasing Hawk readiness, developing missile improvements, and refining requirements and design concepts for the phase III product improvements. Fielding of phase II product improvements began in August 1983. FMS countries continued to express interest in the procurement of phase I and phase II product improvements as well as Block II software. With the decision to retain Hawk indefinitely, the Army envisions evolutionary changes to Hawk that emphasizes manpower reductions, improve strategic transportability, and increase fire power improvements that will help support U.S. air defense needs through the year 2000.

During the year, engineering development of the Pershing II ballistic missile, the Army's longest range weapon, continued beyond the planned completion date of September 1983. As part of that development, the Army conducted seventeen flight tests to demonstrate the system's long range capability and accuracy, completed qualification tests on all but two items, and conducted captive flight tests of the radar correlator to evaluate the

guidance system's capability over varying target scenery and weather conditions. The Army also conducted an Operational Test of the system at Fort Sill, Oklahoma, between 21 March and 18 May 1983. On 9 May 1983 the ASARC decided to continue with production activities. Also, receiving the latest flight test information, Congress appropriated procurement funds for the Pershing II missile in July 1983. Thus, the Army planned to award a contract for the missile in October 1983. Meanwhile, pending availability of the Pershing II, work continued on Pershing Ia (PIa) modifications to extend the missile's operational life. Successful firings of five missiles on 28 September 1983 demonstrated the operational readiness of the PIa system.

This fiscal year the Army improved the Lance missile system by upgrading its nonnuclear and nuclear warheads. At present, the Army plans no further improvements for the system.

FY 83 also was the fifth year of production for the Basic Stinger missile, the Army's first new manportable air defense system since the late 1960s. On 9 September 1983, the Army awarded a firm fixed price production contract for the procurement of 962 Basic Stinger missiles, for delivery beginning in December 1985. By the end of the fiscal year, the Army had received 4,995 missiles from previously awarded contracts. During the year the Army completed engineering development for the Stinger–Passive Optical Seeker Technique (POST), an improved missile guidance system, and in July, the ASARC decided to initiate the development of a Reprogrammable Microprocessor (RMP) version of the Stinger-POST. The RMP will facilitate future change as the threat evolves through an external reprogrammable module rather than by making changes internal to the missile. On 6 September 1983, the Army awarded the Stinger-POST initial production contract for forty-four missiles. The contractor is to deliver the first nontactical missiles in September 1986. This fiscal year the U.S. government signed a MOU for coproduction of the missiles with the FRG, the lead nation in a NATO consortium, that also includes Belgium, Greece, the Netherlands, and Turkey. Also during the year, the Army completed FMS cases with Germany, Japan, Italy, Switzerland, and Turkey and initiated many others.

Unlike the Stinger missile, the Dragon missile remained out of production this fiscal year, about 40,000 were on-hand. The Army, however, awarded a contract in May to the McDonnell Douglas Astronautics company to replace defective rocket motor igniters. For $19 million dollars, the company was to rebuild over 20,000 rounds of igniters manufactured with a milled lead styphunate that had deteriorated with age. Firings of selected Dragon missiles manufactured between 1975 and 1978 had demonstrated

the defects. In August 1983, McDonnell Douglas submitted an unsolicited proposal to the Army Missile Command for incorporating an improved warhead on Dragon during the Dragon rebuild program. The Missile Command did not evaluate the proposal, as the Army had no requirement for an improved warhead.

Improvements to the basic TOW system, called TOW-2, will enable this system to defeat anticipated enemy armor threats and also preserve the Army's large investment in its primary infantry heavy assault weapon. Over 300,000 TOW missiles have been produced for the Army, the Marine Corps, and the armed services of forty foreign countries. During FY 83, the second year of TOW-2 production, the Army received the first deliveries of TOW-2 missiles from the 1982 contract. Also, in support of TOW-2 fielding, this fiscal year the Army completed Instructor and Key Personnel Training (I KPT) at Fort Benning, Georgia, initiated new equipment training at Wiesbaden, West Germany, validated and verified maintenance manuals, published technical and supply manuals, and established a Depot Maintenance Plan. With the initial TOW-2 deployment to the Infantry School, Fort Benning, Georgia, in July 1983, the Army accomplished the First Unit Equipped Date (FUED). These activities culminated in the approval of the Materiel Review Release Board's recommendation for full release of the TOW-2 weapon system in September 1983. The Army Missile Command at Redstone Arsenal, Alabama, manages the overall TOW Improvement program, while the Army Research and Development Command Picatinny Arsenal directs warhead improvements. Hughes Aircraft Company is the prime contractor for TOW improvement, and Texas Instruments, Inc., is the primary subcontractor.

In December 1982, after the Four Star Review, Army Chief of Staff General Meyer, agreed to cancel the Rattler medium antiarmor system for infantry units, because of costs, and in the following month, the Army disbanded the Rattler management office at Missile Command (MICOM). The Army then initiated the advanced antitank weapon system (AAWS) under the Rattler program element (PE) and established funding for it in the FY 85 POM. During the remainder of FY 83, the Army continued to support the AAWS during the formulation of the FY 85 budget.

The Office of the Secretary of Defense renamed the Corps Support Weapon System (CSWS), the Joint Tactical Missile System (JTACMS) this fiscal year. OSD established the joint program office at Redstone Arsenal and appointed the program manager in March 1983. Since its establishment, the program office has worked with the CSWS Special Task Force (STF) and the Air Force to define the Joint Service Operational

Requirement (JSOR) for the system; complete a force-on-force analysis; conduct a baseline cost estimate for the various development alternatives; and, prepare for a FY 84 ASARC review of the program.

Also in the area of missiles and air defense, this fiscal year the Army moved forward with the Laser Weapon Technology program, a totally new dimension of weaponry. MICOM submitted to the Army Directed Energy Weapons Program Management Plan (PMP), which TRADOC assembled and staffed, estimates of the total resource requirements and development schedules for the laser program. With the prime contractor, the Westinghouse Electric Corporation, MICOM completed the preliminary design for the Roadrunner technology demonstrator, which is designed to show all the functional elements of a laser weapon in the close combat role. MICOM initiated contract and in-house efforts aimed at improving laser efficiency, scaling up its output, and controlling its wavelength selectivity. MICOM determined experimentally the susceptibility of the U.S. common module FLIR to laser damage at the primary wavelength and determined waveforms of interest for potential laser weapons. As a result, MICOM developed analytical models, which allow one to predict laser damage for almost any desired situation. MICOM has disseminated this information to those individuals charged with protecting U.S. weapons employing FLIRs as well as to individuals studying the potential development of U.S. laser weapons systems.

FY 83 was the second year of production of the Sgt. York Division Air Defense (DIVAD) Gun system. This system provides heavy divisions with a modern antiaircraft weapon that can maneuver with front line units and engage sophisticated aircraft. During the year the Army awarded a contract for 96 fire units and associated support equipment, which brought the total to 146 fire units under contract out of a planned program of 618. The first production fire unit came off the assembly line on 1 September 1983. In December 1982, the Army had completed the Contractor Engineering test and from June through August 1983 conducted an Engineering Prototype Unit Test (EPUT). The EPUT demonstrated improvements in armament feed system reliability, fire control system reliability, and increased kill probability against both helicopters and fixed wing aircraft. Additionally, the Army updated the Cost and Operational Effectiveness Analysis (COEA) using demonstrated performance data. The study will continue through most of FY 84, as will instructor and key personnel training courses that the Army began in FY 83.

The development of ground combat systems received much attention this year. The Army focused on the M1 Abrams tank,

the M60A3 tank, the M2 and M3 Bradley fighting vehicle systems, the carrier, personnel, full-tracked, armored M113A2 vehicle, howitzer developments, the field artillery ammunition support vehicle, and the 9-mm. hand gun.

In November 1982, the M1 Abrams tank program, in its second year of production, reached its approved production rate of 60 per month: 30 at the Army Tank Plant at Lima, Ohio, and 30 at Detroit, Michigan. After falling behind for most of FY 83, as a result of poor manufacturing quality control at the engine plant, engine production caught up and was ahead of schedule by the end of the fiscal year. By then, tank production stood at 1,366. A major event related to engine quality occurred in FY 83. The Army and the M1 engine producer (AVCO-Lycoming) undertook to correct engine problems revealed in the FY 82 durability test. By July 1983, all indications were that they had solved the problems, and testing resumed at Aberdeen Proving Ground (APG), Maryland. By the end of the fiscal year, only one engine failure had occurred and prognosis for final success was good.

FY 83 was a year of major economies in tank production as well. General Dynamics Land Systems Division, which had taken over the operation from Chrysler in March 1982, reduced manufacturing manhours per tank by about 40 percent. Tough Army negotiations and contractor efficiencies resulted in significant contract savings, which the Army transferred to FY 84 to buy additional M1 tanks. For example, the Army initiated a three-year multiyear contract with Hughes Aircraft Corporation, producer of the Laser Rangefinder and Thermal Imaging System, two high cost major components. This contract will result in major savings over the single year contract method. Additionally, although the Army attempted to introduce competition into engine production by obtaining a second producer for the Aircraft Gas and Turbine (AGT) 1500 turbine engine this fiscal year, FY 84 budget congressional action did not allow this to happen but did direct that the Army conduct a new study of the engine acquisition strategy and submit the study to the Congress during the FY 85 budget hearings.

Fielding in FY 83 continued to be the major success of the M1 program. By the end of the fiscal year the Army had fielded four battalions in CONUS and six in Europe. Also in March 1983, the first National Guard M1 battalion began receiving M1s for training. In REFORGER, September 1983, the 2d Squadron, 11th ACR repeated the outstanding performance of the M1s in REFORGER 1982.

The M1E1 (M1 with 120-mm. gun, NBC overpressure protection system and improved armor) program remained on its tight schedule during FY 83. Developmental test II, which the

Army conducted mainly at APG, Maryland, included firing, automotive, and human factors, as well as desert and arctic testing. The Army has corrected the problems encountered and will field test the M1E1 in operational test II in FY 84.

Production of the M60A3 tank in FY 83 reached 382, 125 were for the Army and 257 for foreign customers. Based on current production contract schedules, the Army expects to receive the final M60A3 vehicles in May 1985.

The conversion of M60A1 tanks in the Army's inventory to the M60A3 tank thermal sight (TTS) configuration made good progress during the year. Anniston Army Depot, Alabama, made 357 conversions and the Mainz Army Depot, Federal Republic of Germany, 212. The Army also expects to retrofit all the M60A3 tanks to the TTS configuration no later than October FY 90. During FY 83, it retrofitted 123 M60A3 tanks in USAREUR and 112 in CONUS.

During FY 83, deployment of M60A3s to USAREUR and CONUS continued from both Mainz and Anniston, respectively. June 1983 marked the completion of deployments to USAREUR units, bringing the total number of conversion tanks there to 1,740. All remaining Mainz conversion tanks are going into war reserves. Anniston conversion continued to outfit Forces Command and National Guard round-out units in 1983. Deployments to CONUS are scheduled for completion by FY 87. Total number of conversion tanks issued during the fiscal year reached 483.

Work continued in FY 83 on M60 series tank product improvements, which the Army was developing on the basis of two objectives. The primary objective was to advance tank performance in the areas of firepower, mobility, reliability, availability, maintainability, and deployment. The secondary objective was to ensure commonality or interoperability with the M1 Abrams tank in order to standardize logistics support and increase training efficiency. Hence, the Army took a number of initiatives. It began applying accuracy improvements to the Main Gun; completed testing of hardware developed in the Clean Air program; initiated a hybrid Automatic Fire Suppression System (AFSS) concept; revised the purchase description (PD) of the AFSSs major components and capabilities; initiated an improved 105-mm. gun program; completed research and development of the optical improvement to the TTS and programmed funds to procure it in FY 84. In another action this fiscal year, the project manager of the M60 tanks program realized considerable cost savings through a five-year contract awarded to Texas Instruments on 4 March 1983 to buy out TTS. "Should Cost" efforts so far indicate that the Army can expect savings in excess of $340 million.

This fiscal year the Army awarded a procurement contract for 600 Bradley fighting vehicles. Deliveries, during the year, from contracts made in previous fiscal year totaled 569. The Army furnished these vehicles to service schools for development of logistics support and to the 2d Armored Division at Fort Hood, Texas, and the 3d Infantry Division in Germany. The Bradley fighting vehicles completed initial production testing (IPT) at APG, Maryland. The seven Bradleys tested accumulated a total of 30,000 miles and demonstrated a reliability factor of one failure for ever 419 miles, which was greater than the set goal of one every 240 miles.

Hughes Aircraft Company continued to develop the TOW-2 missile subsystem for the Bradley. The TOW will provide increased probability of hit for TOW missiles, greatly increase TOW capability during periods of reduced visibility, and capability against electrooptical countermeasures.

Other subsystems for the Bradley—the 25-mm. gun and the 5.56-mm. Firing Port Weapon (FPW) programs—continued in production. The Army received a total of 785 guns in FY 83, including the 1000th gun, which gave the government complete rights to the technical data package without concern for royalty payments to the contractor. Production of the M231 Firing Port Weapon was completed this fiscal year. The Army received the last of the 18,850 (plus an option for 550 more) FPWs contracted for in FY 82.

Another Army vehicle, the M113A2 armored personnel carrier continued to be the workhorse of the Army's mechanized forces, with over 25,000 vehicles in-service. The Army awarded the FY 83 contract for 643 additional vehicles to help meet increasing requirements, including those for Divison 86, force modernization weapons systems—the Improved TOW Vehicle (ITV)—the Fire Integration Support Team Vehicle (FISTV), and foreign sales.

The ITV is an M113A2 armored personnel carrier modified by the addition of a two-tube launcher head mounted on a hydraulically driven cupola with a 360 degree traverse capability. It provides armor protection for the crew and TOW systems components against small arms and indirect artillery fire. The ITV program continued on schedule, both in the production and deployment of ITV and the application of the TOW modification kit to vehicles for their initial deployment to the CONUS training base. The FY 83 contract award will build 373 ITVs. The TOW-2 modification provides additional capabilities on the battlefield and optimizes the performance of the improved TOW-2 missile. Application of these modification kits to FORSCOM units is scheduled for July 1984.

The Army awarded the first production contract for seventy FISTV modification kits to Emerson Electric. The Army expects the FISTV to provide significant improvements in the use of fire support elements, because the FISTV employs a modified ITV weapon station and "hammerhead" along with a four radio communications capability and laser target designator.

The Army took a number of actions to improve the howitzer system during FY 83. It developed towed artillery requirements for the 10,000-man light division. In the area of self-propelled artillery, the Army focused on modernization of the M109 155-mm. howitzer, in order to maintain it as an effective weapon system through the 1990s. The Army has already initiated the Howitzer Extended Life Program (HELP). Prototype HELP kits, which are designed to improve reliability, maintainability, survivability, and NBC protection, have been procured and are being tested. To bring the M109 to its maximum cost effective capability, the Army is planning major improvements such as loader assist, a new gun mount and recoil system, which will allow installation of an improved cannon and breech canon similar to the one now installed on the M198 howitzer, an improved engine, and an onboard microprocessor for firing data computations. Concurrently, the Army is thinking beyond the 1990s, and is planning development of technologies that will enable it to field a replacement system in about the year 2000.

The Field Artillery Ammunition Support Vehicle (FAASV) is an armored ammunition carrier fabricated on an M109 derivative chassis. It incorporates an X–Y stacker for moving ammunition inside the vehicle, and a conveyor for moving ammunition from the FAASV into the howitzer. The conveyor can also be used for moving ammunition into the FAASV when replenishing stocks. The Army awarded the initial production contract in May 1983 and will equip the first operational unit with FAASV in May 1985. The Army intends to field FAASV in Europe only.

As a result of the February 1982 cancellation of the 9-mm. solicitation and the congressional denial of the FY 83 procurement funds, the Army was involved with restructuring the entire 9-mm. Personal Defense Weapons (PDW) during FY 83. It revised the JSOR to reflect more realistic criteria which a commercial handgun adopted to military use would be able to meet. For example, the Army would measure candidate weapons on a comparability basis with the performance of the M1911A1 pistol. Revision of the Coordinated Test Plan and other associated documents reflected these changes. Revision of the Acquisition Plan reflected the changes in the JSOR and revision of the solicitation changed it from a Request for Proposals (RFP) to a Request for Test Samples (RFTS). These revisions allowed the DOD to begin

to test, evaluate, and select a handgun and prepare to procure the weapon should funds be available in the FY 84 budget. The DOD deleted the additional requirement for a smaller handgun for air crews because of the possibility that the winning PDW might satisfy the requirement.

International Research and Development

The Army conducts its research and development efforts with foreign governments and organizations through the International Office, Office of the Deputy Chief of Staff for Research, Development, and Acquisition (ODCSRDA). During FY 83, the International Office, ODCSRDA, was concerned with U.S. Army research and development relationships in Western Europe and in the Middle and Far East. In addition, it supervised the activities of the Primary Standardization Office that had handled American, British, Canadian, and Australian Quadripartite Group (ABCA/QWG) matters and TEAL—a conference held every eighteen months to review the work of the English-speaking armies under the auspices of the U.S. Army Vice Chief of Staff and his ABCA counterparts. International Office activities, however, largely centered on Western Europe and, in particular, NATO. This office consolidated Army position papers for the senior national representatives and Army meetings held in September 1983 in London, and became the Army's point of contact in advancing the Secretary of Defense initiative regarding emerging technologies. The International Office also monitored arrangements for shifting U.S. responsibility for a NATO Army Armaments Group (NAAG) panel from the USACAA to TRADOC. In the Middle East, the International Office served as the ODCSRDA point of contact for assembling lessons learned from the 1982 war in Lebanon. As for the Far East, the office was involved in expediting the two-way military technology flow between the United States and Japan.

TEAL XXIV took place at the U.S. Military Academy, West Point, New York, over the period 11–15 April 1983. The conference theme was "Coalition Warfare 2000." The Quadripartite Group on combat presented at the meeting a TEAL XXIII directed study on "Lower Intensity Conflict."

Two significant events occurred at the senior national representatives meeting of 13–14 September 1983. One was the U.S. sponsored setting up of a Vulnerability and Lethality Asssessment Group for armor and helicopters. The other was the progress made toward realization of a Third Generation Antitank Guided Weapon Information Exchange Memorandum of Understanding. In negotiation since June 1982, this document has

received approval by the National Armaments Directors (NADs) for signature that is expected in March 1984.

In November 1982, the Secretary of Defense advanced a proposal for the sharing of conventional defense technologies for the near-(1985–1990) and long-(1990–2000) term periods with NATO countries. The NADs have responsibility for this program whose beneficiaries would reciprocate with the United States. Between 23–25 August 1983, technical experts met in Brussels to align key emerging technologies from the United States, United Kingdom, France, Federal Republic of Germany, and the Netherlands with high-priority NATO projects to improve or to accelerate specific programs.

Interoperability with Japan involved two developments. One was a ten-day visit to Japan by the Assistant Deputy Chief of Staff for Research, Development, and Acquisition and the Chief of the International Office to discuss the two-way military technology flow between Japan and the United States and to see industrial plants. The two U.S. Army representatives visited the Technical Research and Development Institute (TRDI) and companies making autos, tanks, carbon steel, and electronic products. The other development concerned the fourth meeting of the U.S.-Japanese Systems and Technology Forum, which was held in Washington, D.C., 7–8 July 1983. The objective of this forum was to improve technical cooperation between the two countries. The International Office, in cooperation with ODCSRDA divisions, furnished information papers to OUSDRE (IP/T) for the meeting and the Chief of the International Office participated in the discussions.

According to Lt. Gen. Merryman, the Army's R&D efforts in FY 83 supported a meaningful Total Army of Excellence. They helped in forging a very credible equipment posture and improved acquisition management procedures, both of which build superiority. The Army must continue, however, to look for better and more innovative ways to do business. By the end of FY 83, Lt. Gen. Merryman believed it was pointed in the right direction. He was "happy to state that we are making great strides in turning the hollow Army into an Army of excellence."

10
Construction, Facilities, and Real Property

To create an Army of Excellence also requires improvements in the seemingly mundane but actually essential nonbattlefield activities associated with facilities and installations for training and housing troops. In performing these activities the Army assumes such roles as architect and builder, real estate broker, landlord, and policeman. As architect and builder, the Army designs and builds, or renovates facilities and installations to accommodate new organizations and new weapons systems worldwide, and thereby supports force modernization. In undertaking this task, energy conservation and environmental concerns, as well as improvements in living and working conditions are considered. As landlord the Army maintains the land and structures used for training and housing troops. This is a major concern, because many of the installations and buildings were acquired before or during the 1940s. As real estate broker, the Army buys and sells land that is no longer needed for training and housing troops; and as policeman, protects the land and structures from vandalism, and the people within, from crime. In FY 83, the Army made significant improvements in all these activities. However, the funding, as in previous years, did not keep pace with the needs, and, despite the progress made, these facilities continued to decline steadily.

Construction

In FY 83, the Congress appropriated $930 million for Military Construction, Army (MCA) and allocated this appropriation among various categories of need. The largest portion, $241 million, went for investment in troop housing, medical, community, and related facilities, including $15 million for a barracks with a dining hall at Fort Bragg, North Carolina; $15 million for dining facilities modernization in Germany; $22 million for hospital renovation in Germany; and $2.6 million for a child care center at Fort Devens, Massachusetts. Operations and training received $167 million, including $43 million for a Command

and Control Facility of Fort McPherson, Georgia, and Battalion Headquarters and classrooms at Fort Hood, Texas; Fort Carson, Colorado; and Fort Polk, Louisiana. Congress authorized $228 million for maintenance and production facilities to equip the field forces, and another $88 million for supply, R&D, administrative, and utilities facilities, in overall support of the Army. Some $17 million went for energy conservation, $4 million for water pollution, and $9 million for correction of Occupational Safety and Health Act (OSHA) deficiencies. Congress appropriated $27 million for minor construction worldwide; $138 million for general authorization planning and design; and $8 million for construction management services in support of construction projects funded by foreign nations, where U.S. forces are the sole or primary user. It appropriated another $3 million for access roads.

The MCA program benefited this year from the worldwide implementation of a Military Construction computer system called Programming, Administration, and Execution (PAX). The system provides Army engineer offices and interactive access to centralized data bases allowing them to prepare and track MCA projects. PAX also provides an international electronic mail system integrated with detail project information in the centralized data bases. Approvals are pending to add automated systems, which would assist users in performing economic analysis, stationing analysis, reviewing environmental impact data and real property assets, and obtaining facilities space criteria data.

The development of other automated systems to aid military construction continued this year. Construction Engineering Research Laboratory (CERL) developed the CAEADS to support the design of military facilities. The Army will integrate this system based on a central source of design information used by all the disciplines in the design process: users, planners, architects, engineers, specification writers, and cost estimators and drafters. When completed, the system will support the military design process, starting the initiation of a requirement for a facility and continuing through to the design and production of working drawings, specifications, and cost estimates.

The Army upgraded the Economic Impact Forecast System (EIFS), which provides information for evaluating socioeconomic changes caused by DOD activities. The improvements will provide an expanded and more current database as well as improved regional economic modeling for evaluating the socioeconomic impact of military construction. EIFS allows DOD activities to prepare economic impact statements in a more timely manner at significantly lower cost.

The Decision Support System activity consists of fielding the latest computer hardware and software communications technology in managing the MCA program. The Army has linked prototype voice input to automatic retrieval of standard programs, with color graphic video and printer display, ready for field testing.

The PAVER, noted in Chapter 8, provides the facility, district, or city engineer with a cost-saving pavement management system that optimizes maintenance and repair funding by helping direct funds to the repair projects where they are most needed. PAVER allows the engineer to store and analyze pavement data pertinent to cost-effective maintenance scheduling and pavement design. Based on the Prototype Evaluation Test conducted at Fort Eustis, Virginia, this system should help reduce the average cost of road maintenance management at Army installations by 50–75 percent. PAVER, which the Army has approved as a Class III computer system, is currently being implemented at several CONUS Air Force and Army installations. Present system users include representatives from all three military services, cities in the U.S. and Canada, and the Tulsa District of the USACE.

The Army established a Building Loads and System Thermodynamics (BLAST) support office at the University of Illinois to provide software and engineering support to DOD BLAST users. BLAST is a comprehensive set of programs for predicting energy consumption and energy system performance and cost in buildings.

The MCA program also benefited this year from a DA organizational change. In October 1982, management of the MCA, RPMA and Army family housing (AFH) accounts was integrated into the responsibilities of the OACE. This has given them the ability for the first time to adjust funding levels between accounts and to respond more effectively and promptly to the needs of Army facilities.

The Corps of Engineers also awarded contracts for the construction of projects funded by other Department of Defense agencies. The total amount of construction awards for each agency during FY 83 are as noted in *Table 18*.

TABLE 18—ARMY CONSTRUCTION AWARDS, FISCAL YEAR 1983

Defense Language Institute	$30,301,000
Defense Dependent School System	$33,930,000
Defense Communications Electronics Evaluation Testing Agency (CEETA)	$2,725,000
Defense Mapping Agency	$25,116,000
National Security Agency	$76,780,000
Defense Logistics Agency	$37,589,000
Other DOD Agencies	$2,407,000

The COE also provided engineering and construction management support to eight foreign countries: Saudi Arabia, Jordan, Oman, Egypt, Sudan, Honduras, Japan, and Korea. The Corps continued to construct the U.S. Geological Survey mission complex in Jidda, Saudi Arabia, and assisted the Department of State in construction of a new embassy complex in Moscow, USSR.

The Corps' major support to a foreign country during FY 83, as in past years, centered in Saudi Arabia. During the year, the Corps continued its "Nation Building" schedule for the Saudi Arabian government (SAG) under three programs: the Engineer Assistance Agreement (EAA) program, and Saudi Naval Expansion Program (SNEP), and the Peace Hawk–Peace Sun program. Work remaining on the SANG modernization program was essentially limited to the closing out of construction contracts that were physically complete. In addition, the COE, under the Saudi Arabian Army Ordnance Corps Program (SOCP), continued to work with and assist in the management and modernizing of their logistics system. At the end of the fiscal year, the total approved U.S. government case value for the Saudi Arabian programs amounted to $21.7 billion (SOCP $2.5 billion, EAA $12.3 billion, SNEP $5.6 billion, SANG $0.4 billion, Peace Hawk–Peace Sun $0.7 billion, and other work $0.2 billion).

Other construction by the COE in Middle Eastern countries and the Sudan included the Armor Rebuild Facility at Amman, Jordan, for the Jordanian armed forces; Rapid Deployment Joint Task Force bases in Oman, including airfield facilities at Masirah Island, Thumrait, and Seeb for U.S. forces; a Biomedical Research Laboratory in Cairo, Egypt, for the U.S. Navy and funded by them; and the design and construction of facility improvements in the Khartoum and Port Sudan area, for the government of the Sudan.

In Honduras, the Corps continued construction of a U.S. Air Force airfield at Comayagua. Project completion is scheduled for July 1984. The Corps also completed an austere RMTC at Puerto Castilla on the Gulf Coast of Honduras. The Corps erected the RMTC at a cost of $456,000 with FMS credit funds from El Salvador and Honduras.

During FY 83, Congress provided $5.5 million in MCA funds for the COE to support host nation funded construction in Japan and Korea supplemented facilities funded and constructed by the U.S. government. The governments of Japan and Korea designed, funded, and awarded construction contracts and oversaw the production of facilities for U.S. forces. Japan budgeted $288 million for the program. Korea provided $66 million.

The COE continued to provide engineering and construction support to the Navy. In FY 83, it awarded construction contracts amounting to $7.9 million for such projects as Aircraft Rinse Facilities in Futema, Japan, at a cost of $2 million, and Steam and Condensate Facilities at Atsugi, Japan, at a cost of $1,700,000.

Facilities and Real Property

The Army undertook a number of initiatives in the area of facilities and real property this year. These actions involved the establishment, expansion, repair, upgrading, relocation, and acquisition of Army facilities and installations.

The COE acts as Executive Agent for the DOD Recruiting Facilities program. During 1983, the Corps completed 2,472 actions involving the establishment of new recruiting offices and the relocation, expansion, and upgrading of existing offices. At the end of the fiscal year, the four services had approximately 7,750 recruiting offices.

To aid facilities and installation planning design, this year the Corps took a number of actions, besides the development of the CAEADS mentioned earlier. The OCE published 22 facility support plans (FSPs) and 150 facility planning worksheets (FPWs) to assist installation planners and programmers in identifying facilities required to support the fielding of new systems and organizations. The Corps also utilized the ETIS, which is a user friendly, remote terminal system that assists Army planners to forecast and mitigate the critical and economic impact of any proposed action on an installation. The Department of Urban and Regional Planning at the University of Illinois in Urbana-Champaign operates and maintains this system and provides training to all DOD users as well as city and state planning commissions. In addition, this fiscal year the Corps used a microcomputer system to streamline management at the Fort Ord, California, Directorate of Engineering and Housing (DEH), which resulted in savings of $25,000 or the cost of the system. The implementation of the microcomputer system brought about improved procedures, more flexible management support, and a better quality of overall operations.

At several Army installations this year the Corps developed and demonstrated a technique for rapidly constructing improved temporary living and storage facilities for use during mobilization. The technique involves inflating a membrane and spraying it with polyurethane foam. Low-skill personnel can produce polyurethane foam domes up to 50 feet in diameter in a single work day. Troop labor can erect a structure designed to house troops, including concrete floor, windows, wiring, exterior and interior

coatings, for $9.00 per square foot, while a contractor can build the same structure for $15.00 per square foot. The Army is using the demonstration domes built this year for office storage space and for range houses.

The Backlog of Maintenance and Repair (BMAR) is a measurement at the end of each fiscal year of required maintenance and repair work remaining unaccomplished because of inadequate resources. In this sense, accomplishment means obligation of funds or start of work by civilian employees or military personnel. BMAR is synonymous with deferred requirements and includes those resources essential to correct facility deficiencies. Maintenance involves the day-to-day cyclic performance of work required to prevent incipient failures and further deterioration of a facility. Repair consists of work required to restore a failed or failing real property facility or component to such condition that the Army can use it effectively for its designated purpose. The lack of resources during the 1970s, compounded by a soaring inflation rate, and the rapid deterioration of aging facilities, resulted in the total overall Army BMAR to reach over $3 billion by the end of FY 81. The Army program for the remainder of the 1980s was designed to reduce the BMAR. The downturn actually occurred in FY 82 when the BMAR stopped growing for the first time in over ten years. The Operation and Maintenance, Army appropriation BMAR declined by $24 million, while actual direct obligations applied to maintenance and repair needs and BMAR projects amounted to $1.333 billion, a 45.8 percent increase over FY 81. This improved resource program continued in FY 83 bringing the OMA BMAR down to $1.76 billion. Funding programs for FY 84 and the budget for FY 85 continue to provide resources to allow for BMAR reduction although only at about $7 million per year. As the backlog reduces, the condition of facilities will continue to improve resulting in better living and working conditions for U.S. forces worldwide.

During FY 83, the Corps of Engineers acquired 276 thousand acres of land for the Army using military and civil works appropriations at a cost of $88 million. The largest acquisition consisted of the Pinon Canyon Maneuver Site, Fort Carson, Colorado, which involved 246,200 acres of federal, state, and private lands. Continuing its program of land acquisition for other federal agencies, the Corps acquired 1,288 acres of land for the Air Force. This included approximately 500 acres with improvements for an estimated $8.2 million to expand clear zones at ten Air Force bases. The Corps purchased 17 tracts containing 1,475 acres at a cost of $3.19 million for the Department of the Interior's Big Thicket National Preserve in Texas. This brought the total acquisition for this project through FY 83 to 1,292 tracts

consisting of 75,374 acres at a cost of $72.82 million. The Corps obtained 54 tracts consisting of 541.92 acres at a cost of $13.1 million for the Department of Energy's Strategic Petroleum Reserve Program. This brought total acquisition for this program through FY 83 to 1,140 tracts consisting of 6,104 acres at a cost of $138.47 million. The Corps bought 6,131 acres for $5.978 million during FY 83 for the Fish and Wildlife Service (FWS) Tensas National Wildlife Refuge in Louisiana. This brought acquisition for the project through FY 83 to 16,760 acres at a cost of $15.478 million. During FY 83, the Corps paid $3.1 million in relocation assistance benefits to 330 applicants displaced by its land acquisition activities.

At the close of FY 83, the DA controlled approximately 12.2 million acres of military land worldwide and 11.8 million acres of civil works lands which, with improvements, had an acquisition cost of $18.8 billion and $19.4 billion, respectively. During the fiscal year, the federal government disposed of 7,444 acres of military and civil land and improvements having an acquisition a value of $4.9 million. In addition, the Army declared and reported to GSA for disposal 71,472 acres of excess federal lands having an acquisition cost of $238.5 million. At the end of the fiscal year, the Army had leased or rented 27,493 parcels of land covering 9.2 million acres to others. These outgrants authorized other military departments, federal agencies, state and local governments, and private organizations or individuals to use Army lands for a wide range of purposes, such as agricultural, grazing, recreational, public park, banking, educational, and rights-of-way.

Executive Order 12348, dated 25 February 1982, requires each executive agency to review its real property holdings and report as excess those lands which are not utilized, are underutilized, or are not being put to optimum use. One of the purposes of the Executive Order is to offer such property for sale with the intent to reduce the national debt. In keeping with the intents of the Executive Order the Army scheduled seventeen installation utilization surveys for calendar year 1983 plans to conduct fourteen installation utilization surveys in calendar year 1984.

Executive Order 12411, dated 29 March 1983, institutes fundamental changes in the manner in which all federal work space is managed. The order directs the heads of executive agencies to undertake actions for improved utilization, and delegates authority to the GSA to establish government-wide objectives and regulations. Objectives of the program include improving utilization of all work space and related furnishings, achieving agencywide office space utilization rates of 135 net square feet or less per

person, and reducing total work space inventory by 10 percent. The initial report for the Army to GSA in September 1983 showed an overall Army utilization rate of 127 net square feet per person for GSA-assigned office space, and 173 gross square feet per person for agency controlled office space. This is within the initial GSA objective.

The FY 83 MCA program contained $210.5 million for construction of facilities in support of new tactical systems. The primary beneficiaries of this expenditure were MLRS, Patriot, BFVs, and the DIVAD.

Physical Security

One of the objectives of the Army's Physical Security program is to provide security for its vulnerable underground munitions depots. In this endeavor, CERL developed a containment concept for use by underground munitions storage facilities in the event of an accidental internal explosion. Scientists are now conducting tests at the Naval Surface Weapons Center (NSWC) and at the Lawrence Livermore National Laboratory to develop material for a new barrier system inside storage facilities. The concept will provide numerous benefits to the military. Its use will decrease the time needed for outlay from eighteen to three hours, and increase survivability, security, material handling, and safety. Other advantages include facility tonedown, concealed weapon maintenance movement and weapon transfer, and provisions that would allow troops to be concealed while practicing uploading. The CERL concept proceeded to the 90 percent design phase for a $60 million Air Force sites in the United States. For this project, the Air Force was able to reduce the real estate requirement from 81 to 9 acres, and the security force from 465 to 165 personnel. The Army and Navy are evaluating other extensions of this concept, including installation of an underground depot for Kuwait.

The Army also is developing a novel, yet simple, shock isolation concept to increase the vulnerability levels for ADP equipment so that it can survive the ground shock from nuclear blasts and remain at a working level. The Army is formulating the concept in support of the Supreme Headquarters Allied Powers Europe (SHAPE) Project 85 and the North American Aerospace Defense Command (NORAD) Cheyenne Mountain Complex.

In March 1983, the Department of the Army Physical Security Review Board initiated a review of problems and issues pertaining to physical security equipment. The mission of the review task force was to review the management of the Army Physical Security equipment program, discern issues, and establish

objectives that correct identified deficiencies. Each of the task force's four workgroups—policy; requirements, development, and acquisition; fielding and support; and concepts and doctrine—first identified goals and objectives within its area of interest and then determined those problems which inhibit the attainment of the various goals. As a result of efforts so far, action is under way to develop or define policy, provide increased resources to expedite the development of requirement documents, influence organizational changes to finish increased support to field commanders, and acquire additional monetary resources to allow for the procurement of required equipment.

During FY 83, the Army discovered 224 weapons missing from arms storage facilities. The U.S. Army Military Police Operations Agency (FOA) attributed weapon losses during this period to negligence on the part of the individual to whom the weapon was assigned, theft by members of the unit, or by unknown persons. Ammunition and explosive losses amounted to 242,496 items. The military police believed that the losses were attributed to theft of items by members of the unit, by unknown persons, or to inventory shortages. Losses of conventional arms, ammunition, and explosives continued to be single weapons or small quantities of arms and munitions. The military police attributed the reduction in losses of conventional arms and munitions during 1983 to a continuation of the policy of providing security to weapon storage areas and an Armywide command emphasis on management of weapons from the time of their production until destruction (i.e., throughout their "life cycle").

Terrorist acts in FY 83, sponsored by sovereign states, organized political entities, or individual groups, perpetrated to achieve political objectives were a threat to the U.S. armed forces, which compelled the Army to take measures to prevent and counter terrorism. In April 1983, the Army published Training Circular 19–16, *Countering Terrorism on U.S. Army Installations.* This circular consolidates Army doctrine, policy, and guidance on operations for countering terrorism and is directed to the person developing a special threat plan for an Army installation or unit. In June 1983, the Army published Department of the Army Pamphlet 190–52–1, *Personnel Security Precautions Against Acts of Terrorism,* which provides general guidance to soldiers and their families concerning precautionary measures against acts of terrorism. Additionally, on 15 August 1983, the Army published the revised Army Regulation 190–52, *Countering Terrorism and Other Major Disruptions on Military Installations.* This regulation outlines Army policy on countering terrorism and on personal protective measures against terrorist acts. It also provides planning guidance for handling major disruptions on military installations.

Army leadership in combating terrorism during FY 83 will continue into FY 84.

Also, to improve physical security this year, the Army changed a number of Army regulations. Change 2 to Army Regulation 190–11 included the following revisions: exceptions granted under the previous Army Regulation 190–11 (30 March 1977) are valid and need not be resubmited; elimination of the double-door requirement for arms rooms; addition of the Navy high security shrouded hasps and the recommendation to use them at category I and II storage facilities; elimination of the requirements already addressed by Department of Defense Manual 5100.76, *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives.* Change 2 also established the responsibility for the locking hardware program, the weapon racks and security container program, as well as the publishing of a list of DOD and DA approved standardized physical security equipment, including an intrusion detection system. The Army published the revised regulation on 15 July 1983 with an effective date of 15 August 1983.

During the period 25 February 1983 to 31 March 1983, the Army Military Police Operations Agency, with input from appropriate major commands and the Department of the Army staff, revised Army Regulation 190–15, *Physical Security of the Alternate Joint Communications Center* (AJCC). The objective of the revision was to update the physical security program for the Center and to appropriate manpower and equipment according to local needs.

On 25 July 1983, the Army Military Police Operations Agency, after receiving input from all military departments and DLA, submitted the final draft of Army Regulation 190–16, *Joint Service Regulation on Physical Security.* The purpose of the new regulation was to implement standardized general policy on physical security system planning, threat statements, control of access to installations, aircraft security, security of bulk petroleum assets, and security of communication facilities. In September 1983, the Army Adjutant General forwarded the completed draft regulation to the military departments and DLA for authentication and assignment of a publication number.

This year the Army revised Army Regulation 190–18, *Physical Security of U.S. Army Museums.* Significant changes include: all weapons will be registered into the Department of Defense Central Registry, keys to museums will be maintained separately from arms storage and intrusion detection system keys, keys to museums and displays will be removed from the installation only under the commander's authorization, weapons will be marked with catalog numbers, and the use of master or multiple keys

system is prohibited. The Army has scheduled publication of the revised regulation for the second quarter of FY 84.

This fiscal year, the Army made steady progress in programs concerned with construction, facilities, and real property. Such activities, as the development of automated systems to aid military construction, including planning and design, and the construction of installations and facilities to accommodate new organizations and new weapons systems, supported force modernization. However, despite a reduction in the Backlog of Maintenance and Repair, inadequate resources permitted facilities to continue to decline faster than the Army could make improvements.

11
Special Functions

Special functions, such as civil works, environmental protection and preservation programs, energy conservation, and litigation are activities that deeply involve the Army in the life of the civilian community. Since the 1780s the Corps of Engineers have played a major role in the civil works of the nation. Besides benefiting the nation's residents and economy, this activity provides in time of peace a training ground for Corps of Engineers officers to develop the construction skills they need in time of war. Environmental protection and preservation programs permit the Army to work with the civilian community to preserve the nation's natural resources. The Army becomes more directly involved with the civilian community, however, in energy conservation since gas, oil, coal, or other types of energy are essential to a highly mechanized force. Such close relationships with the civilian community sometimes lead to controversy, the consequences of which are litigation involving the Army.

In recent years, the Corps of Engineers involvement in civil works has focused on developing and maintaining the nation's water resources. In that endeavour, this fiscal year the Corps primary areas of interest were flood control, regulatory functions, navigation, and dam safety.

Due to the inability of the Congress to agree upon and pass the energy and water development appropriations bill for FY 83, the Corps of Engineers civil works program was funded through the continuing authority provided by PL 97–276 and 97–377. This authority allowed the Corps to maintain its activities based on the FY 82 level of obligations. The amount received equaled $2,975,385,000. Besides these funds, $389,000,000, was allotted under the Productive Employment Appropriations Act (PL 98–8), and $54,800,000 in supplemental appropriations (PL 98–63). The supplemental amount includes $17,800,000 for salary increases attributable to changes in GS pay scales. *Table 19* provides a breakdown of all FY 83 funds by appropriation account.

During FY 83 Corps dams, levees, and local protection projects saved the civilian community an estimated $23.2 billion in flood damages, surpassing its previous record of $19.4 billion set in FY 79. Through FY 83, Corps flood control projects prevented a total of $129 billion in flood damages, including $9.5 billion

during the past ten years. Corps undertakings were particularly effective in preventing major urban losses and evacuations in the Lower Mississippi Valley this fiscal year, despite the second largest peak flow on the Mississippi River at some locations in fifty-five years. Preliminary analysis indicates that Corps flood control projects within the Lower Mississippi Valley prevented flooding of more than fourteen million acres and flood damages estimated at $20 billion. Corps flood control works also were highly effective in preventing flood damages in parts of California and Oregon.

TABLE 19—FUNDS BY APPROPRIATION ACCOUNT BREAKDOWN, Fiscal Year 1983

Account	Funds
General Investigations	$139,042,000
Construction, General	$1,508,405,000
Operation and Maintenance, General	$1,201,367,000
Flood Control, Mississippi River and Tributaries	$403,052,000
General Expenses	$100,100,000
Flood Control and Coastal Emergencies	$54,877,000
Special Recreation Use Fees	$4,942,000
Permanent Appropriations	$7,400,000
Total	$3,419,185,000

Beside saving lives, property, and money, the Corps flood control projects make other contributions to the national well being. By creating the demand for labor and materials, construction projects offer an important means for increasing the utilization of labor and capital resources idled by prolonged recession.

This fiscal year, the Department of the Army proposed cost-sharing as a way of paying for certain types of Army sponsored water projects. Many worthy projects were not started due to a lack of federal funds, and the president did not expect an increase in federal funding for water projects in the foreseeable future. To redress this, the administration proposed cost-sharing or capitalizing on the capabilities of the project beneficiaries to assemble financing packages. Such action would also weed out marginal projects. The administration argued that nonfederal project financing, such as water supply and electric power, which are extensively funded by the nonfederal sector through the sale of revenue bonds, has been successfully funded through cost-sharing. However, some services provided by water projects, most notably flood damage reduction, are not vendible; for example, flood control is not provided in the normal course of private sector activities, because the government cannot withhold benefits from beneficiaries who will not pay. Yet these benefits are just as real as

those of the vendible outputs; they can be nonfederally funded when local sponsors are able to commit themselves to such institutional mechanisms as flood control districts with assessment and taxing authority to recover the projects costs from the beneficiaries.

The administration's policies on cost-sharing and financing reflected the fundamental differences among the various types of project purposes: for fully vendible services, such as hydropower, and municipal and industrial water supply, which have traditionally been funded successfully through the sale of revenue bonds, the administration expected 100 percent nonfederal financing; for recreation and beach erosion control, 50 percent nonfederal financing; for irrigation and flood control, at least 35 percent cost-sharing, with some flexibility regarding the timing of the payment in cases where contributions in the form of construction financing would impose an undue burden on the nonfederal sponsor. Because the government would recover the cost of deep-draft navigation projects, it was still working out the method of assessing those fees. The administration was proposing recovery of 70 percent of inland navigation costs through user fees based on ton-miles.

As a complement to proposals for increased project cost-sharing, the administration would breakdown traditional planning studies into two parts—a reconnaissance study and then, if warranted, a feasibility study. The reconnaissance portion would explore possible solutions to identified problems in general terms, and the federal government would fund it. If the reconnaissance study demonstrated that a feasibility study might result in a feasible project, and if the nonfederal interest expressed a desire to proceed, then the federal government and the nonfederal sponsor would complete a full feasibility study with the cost shared 50/50 each. As much as half of the nonfederal share could be supplied by "in kind" services if so desired.

A working group of the Cabinet Council on Natural Resources and Environment formulated the position of the administration on non-navigation purposes. The Assistant Secretary of the Army for Civil Works formulated the Army's position. The Senate Committee on Environment and Public Works is considering both proposals, while working on the Water Resources Development Act of 1983. The bill should be out of committee early in the next fiscal year.

Another civil works function of the Corps of Engineers involves regulatory authority over construction activities by others in the nations' navigable waterways. Section 10 of the River and Harbor Act of 1899 codified this authority, and Section 404 of the

Clean Water Act of 1972, and several court decisions, made under the act, greatly expanded the Corps jurisdiction. Today the Corps exercises jurisdiction over construction, dredge and fill operations, and certain other activities in the "Water of the United States," including wetlands.

In FY 83, the Corps continued to streamline its regulatory program following a 7 May 1982 directive from the president's Task Force on Regulatory Relief. In December 1982, however, sixteen conservation groups filed suit to have certain parts of the Corps 22 July 1982 regulations revoked, charging the Corps and the current administration with "abandoning the Nation's wetlands under the guise of regulatory reform." According to the suit, the Corps' regulations allowed discharges that were illegal under the Clean Water Act, and were adopted without adequate consideration for procedures of the National Environmental Policy Act. The primary complaint involved six of the regulation's twenty-seven nationwide permits, which allowed filling without the usual regulatory controls regarding individual permits. The Corps expected an out-of-court settlement in early 1984. The Corps published proposed regulations announcing further reforms on 12 May 1983, including clarification of the jurisdictional scope of the program, expansion of general permits, increased responsibility for the states, modifications to nationwide permit procedures, and administrative changes to allow faster processing of permits. The Corps received over 350 comments from federal, state and local agencies, environmental groups, industry, and private citizens on the 12 May regulations, and scheduled a public hearing in Washington, D.C., for 12 October 1983. The Corps expects to finalize the regulations sometime in FY 84. Meanwhile, the reforms have already reduced average permit application process time by 40 percent (or to 73 days). Also, during the year, the Corps licensed about 10,000 applications through its regional permits, which authorize activities without the need for processing individual applications.

In the area of navigation, the COE continued to operate and maintain the nation's waterways and harbors, a mission it began in 1824 when Congress authorized the clearing of snags and sandbars from the Ohio and Mississippi rivers. In FY 83, the Corps operated and maintained an inland navigation system consisting of about 25,000 miles of improved channels and 204 lock sites. For the most part, the system operated without major incident, allowing the continued movement of a variety of cargoes, primarily bulk items, such as petroleum products, coal, and grains. However, a serious incident occurred on the Arkansas River, in early December 1982 during a period of high river flows, when several barges broke loose from moorings and sank in

front of, or lodged against Dam 2, with some of the barges rendering the dam gates inoperable. The high flows plus an uneven discharge through the dam nearly caused failure of the dam. The Corps completed salvaging in 1983 and made repairs to restore the dam to pre-accident condition. The Corps also began studying ways to modify the dam structure to prevent similar damage, should an uneven flow through the dam again occur. Another Corps initiative involved the closure of Kentucky River Locks 5–14 beginning on 1 October 1982. The upper Kentucky River locks served only recreational traffic and the Corps could not justify their continued operation, particularly in light of budgetary and personnel constraints. These constraints will likely continue and the closure of other waterway systems that primarily serve recreational traffic in future years is a strong possibility. Significant construction activities in FY 83 included continuing work on the Tennessee-Tombigbee Waterway, the replacement of Lock and Dam 26 on the Mississippi River, the replacement of Vermillion Lock on the Gulf Intracoastal Waterway (named Leland Bowman Lock), and the Red River Waterway.

This year the Navigation Analysis Center (NAC) of the Corps of Engineers provided Congress and OMB with the data and analysis they needed for proposed legislation concerning user charges to cover operation and maintenance cost and construction-rehabilitation cost in both shallow and deep-draft navigation. The Corps analyzed various levels and schedules of user charges and their potential impact on revenues and carriers. With the assistance of the NAC, the Corps will continue to provide this data during the coming year.

The inland waterways Performance Monitoring System (PMS) is a detailed data base containing information on the operation and performance of Corps-owned locks on the inland waterways. Three kinds of data are collected for the PMS: shift data, recorded each time there is a shift change or navigation condition change; lockage data for each vessel passing through the lock; and vessel data for commercial tows and cargo-carrying vessels. Milestones of the PMS in FY 83 were: the establishment of a PMS users group to allow wider user involvement in system changes and improvements; completion and delivery to the field operating agencies of a draft of the PMS user guide; implementation of a system to uniformly provide PMS data to private industry; establishment of the steering committee for a PMS users group; completion of the report on the effects that sampling of various types would have on PMS data collection at locks of various sizes; conversion of navigation cost recovery system from commercial to Corps-owned data processing environment; provision of customized training in data collection and editing to Buffalo, Detroit,

Louisville, Galveston, Jacksonville, New York, and Vicksburg districts; significant reduction of gaps in data reported to the PMS central library, and increase of district participation to 100 percent.

In FY 83, the Corps initiated a number of navigation studies for use through data bases. They included costs and characteristics of deep and shallow draft vessels; inland vessel costs parameters; deep draft tug and barge costs; U.S. and Foreign Flag Deep-Draft Vessel costs; costs of rail movements under the International Communications Commission's (ICCs) Uniform Rail Costing System (URCS).

In FY 83, the COE took steps to establish, from private industry, a reserve dredging fleet to augment the Corps minimum fleet in an emergency. On 21 October 1982, the Corps appointed a Corps of Engineers Reserve Fleet (CERF) board to be chaired by Water Resources Support Center-Director (WRSC-D) and consisting of one member each from the Office of Counsel, the Office of Contracting Policy, and the Operations Branch of the Construction Division to determine the scope and concept for a Corps of Engineers Reserve Fleet. On 2 December 1982, the Corps and private dredging contractors agreed upon the concept of a CERF. A basic ordering agreement (BOA) would become the contractural instrument for implementing the CERF, and the Dredging Division prepared this document with special assistance from the members of the CERF board, the Small and Disadvantaged Business Utilization Office, and representative from Corps of Engineers Divisions. On 1 June 1983, General John Wall assigned the contractual responsibility of preparing, negotiating, and executing the BOAs for CERF to the New Orleans District. During the next fiscal year, the Corps expects to accept proposals from dredging firms with hopper dredges, and then negotiate and sign for a reserve fleet.

An essential part of the civil works water resource development program is assuring that the COEs dams meet rigid standards of safety. Since its initial funding in 1980, the Dam Safety Assurance program has reviewed 619 projects (including 87 turned over to other managers for operation and maintenance). Results indicate that about 50 of these projects should be considered as candidates for dam safety improvement. Since studies are not yet complete, the precise number of projects requiring modification is unavailable. Although some of the other projects do not fully meet present day standards, their deficiencies are viewed as not significant enough to warrant inclusion in the Dam Safety Assurance program at this time. The Dam Safety Assurance program's progress through FY 83 is noted in *Table 20.*

TABLE 20—CORPS OF ENGINEERS DAM SAFETY ASSURANCE PROGRAM'S PROGRESS
Fiscal Year 1983

FY	Funds Appropriated	Number of Dams	Studies Construction
1980	$8,175,900	170	0
1981	20,300,000	130	1
1982	30,300,000	124	3
1983	14,500,000	55	2

Environmental Protection and Preservation

In the area of environmental protection and preservation, this year the Army paid special attention to hazardous waste management, automation of the Environmental Pollution Prevention, Control, and Abatement Report, and fish and wildlife preservation measures.

During FY 83, the Army initiated a number of actions concerning hazardous waste management. On 10 May 1983, the Army published Chief of Staff Regulation 5–19, *Hazardous Material and Hazardous Waste Programs.* This regulation prescribes policies and responsibilities for managing hazardous material and hazardous waste programs at the Army staff (ARSTAF) level. Excluded are low-level radioactive waste and NBC warfare issues. On 15 June 1983, the Army published Interim Change to AR 420–47, *Solid Waste Management.* These instructions outline procedures that participating installations must follow to recover the proceeds from the sale of recyclable materials. In August 1983, the DOD and the EPA entered into a MOU for the implementation of the Comprehensive Environmental Response, Compensation, and Liability Act (CERLA) better known as "Superfund." This MOU establishes policies and procedures governing interagency actions for responding to environmental pollution problems particularly the cleanup hazardous and toxic waste sites addressed by CERLA. These procedures apply to the individual services and will guide Army environmental cleanup activities.

Meanwhile, during FY 83, the Corps, as responsible agency for the technical aspects of design and construction for all federal lead Superfund remedial actions, assisted the EPA on Superfund projects. Twenty-eight technical assistance assignments were completed or underway; ten design assignments were completed or underway; and ten construction assignments were completed or underway. The total funds allocated to the Corps for these projects equaled approximately $30 million. Corps projects included cleanup of polychlorinated bipheyl (PCB) wastes and

debris at Lehigh, Pennsylvania, and removal of various chemical wastes and structures at Chem-Dyne, Ohio.

The Army Construction Engineering Research Laboratory, in cooperation with the OACE, has begun development of a pilot system to automate the Environmental Pollution Prevention, Control, and Abatement at DOD Facilities Report—commonly known as the 1383 Report. The 1383 Report, which is submitted annually to the EPA and the OMB, is used to identify pollution control projects and those resources needed to effectively carry out DA environmental programs. Remote access to the pilot automation system, once development is complete, will be through CERLs computer-based ETIS.

As part of its environmental protection and preservation mission, the Corps attempted to preserve the fish and wildlife in the areas adjacent to Corps projects. To do this, it conducted biological studies. Prompted by the Office of the Assistant Secretary of the Army for Civil Works, in FY 83 the OCE initiated a nationwide study to determine the appropriateness and efficiency of having the FWS receive Corps funds to conduct biological studies through formal interagency agreements, as compared to having these same studies performed in-house or by other means. In September 1983, the Corps Institute for Water Resources (IWR) submitted to the OCE the results of studies of some 700 Fish and Wildlife Coordination Act (FWCA) reports produced by the FWS for 519 Corps projects. Their findings concluded that the FWS performance was responsive, timely, technically adequate, and efficient; costs related to FWS studies were reasonable, generally comparable to in-house costs, and less expensive than consultant and private contractor or university costs.

The Sport Fishing Institute also initiated a study to evaluate the fish and wildlife planning at Corps of Engineers reservoir projects. The major thrust of the study was to compare the pre-construction fish and wildlife recommendations with the actual changes in the fish and wildlife resources following the project construction. Also, of specific interest was the acquisition of mitigation lands and their management. Upon completion of the twenty individual reservoir project evaluations, the institute prepared a final report summarizing the pre-construction forecasts and the post-construction results and trends of the fish and wildlife resources. It expected to complete the report in November 1983.

Culminating several years of study effort, the Mobile District completed the Tennessee-Tombigbee Wildlife Mitigation Feasibility Report in July 1983. The purpose of the study was to determine the amount of justified fish and wildlife mitigation

measures needed in compensation for losses incurred by construction of the 232 miles long Ten-Tom Waterway Project. The Ten-Tom project extends from Alabama's Tombigbee River navigation system through a divide cut into Pickwick Pool on the Tennessee River. The district's recommended plan suggests intensive management of wildlife on 72,500 acres of project lands and 16,000 acres of other Corps lands. To complete the mitigation, the report recommended management of an additional 26,000 acres of flood-plain forest. The Board of Engineers for Rivers and Harbors (BERH) received the report in September 1983, and, at the end of the fiscal year was reviewing it.

Army Energy Program

This year, the Army's Energy Program focused on developing alternative sources of energy and energy conservation. The Army's energy consumption in fixed facilities during FY 83 was 14.4 percent below the energy consumed during the base year—FY 75. Although this performance was better than that in FY 82, the desired FY 83 target was not achieved. Even though energy consumption decreased, the overall dollar costs of energy continued to escalate due to increasing unit costs, particularly for natural gas and electricity. In fact, while other major forms of energy generally decreased, electrical energy consumption increased at most installations.

The Army used a wide range of initiatives to reduce energy consumption. The Department of the Army, Major Commands, and installations employed on-site reviews, seminars, contests, technical sessions, and various personnel motivation efforts. The Army also provided increased funding for operations and maintenance, Army energy-related projects, particularly in USAREUR. During FY 83, the Army provided $62.7 million for accomplishment of 96 projects in the Energy Conservation Investment program for Active Army and family housing facilities.

The Army uses 84 percent of the energy it consumes annually to operate its installations. The cost of this energy is $1 billion per year. To manage the use of energy resources on Army installations more effectively, it has characterized the electric and thermal energy consumption profiles for typical Army buildings from two standpoints: their response to weather conditions and their time-dependency. The characterization includes equations that relate electrical and thermal energy consumption to heating and cooling degree days. The Army has completed a report and an Engineer Technical Note detailing the characterization for six commodity groups (family housing, troop housing,

administration, maintenance, community facilities, and storage facilities). Use of this information will reduce planning time and result in more effective use of energy dollars.

The Army also estimated the percentage of energy consumed by process activities at each DARCOM installation. The results clearly indicated the breakdown between process and nonprocess energy within DARCOM, and enabled the Army to update and track DARCOM process energy consumption. The DARCOM Energy Office used the individual estimates to develop energy conservation plans, which permitted the Energy Office to partition energy conservation efforts between buildings and processes.

Title 10, *United States Code,* requires that the Army perform solar feasibility studies for all new military construction where the use of solar energy has the potential for displacing fossil fuel. To make these studies as inexpensive as possible, the Army developed a computer program, known as SOLFEAS (Solar Energy System Economic Feasibility Program), that ranks prospective projects for four district thermal applications. The user friendly computer program has been under pilot research in six Corps districts. The results indicate that solar studies, which usually take a month to perform and cost up to $20,000, can be performed in an hour at a cost of less than $50, and with the same precision.

This year the Army initiated a program at Fort McClellan, Alabama, to demonstrate energy conservation on an installation-wide basis, concentrating on implementation of rapid payback energy conservation technologies and intensive energy management techniques. The rapid payback technologies included the continuous sampling of combustion gases on central plant boilers and the automatic adjustment of boiler fuel and air ratios for optimal efficiency; the development and installation of a load-dispatching system to permit the central plants to provide an output just sufficient to meet the most demanding customer; radio control of exterior lighting, systematic reduction of forced outdoor air ventilation rates on all major air-handling systems; improved fan efficiencies; techniques to improve air tightness in family housing; automated condenser tube cleaning to enhance chiller performance; summer shutdown of central plant systems by providing on-site domestic hot water generation; and optimization of small building boiler efficiency. Management activities included metering of major energy users, such as central plants and large barracks complexes, central plant operating schedule changes, continuous Heating, Ventilating, and Air Conditioning (HVAC) control system calibration, and increased emphasis on energy conservation.

Army Litigation

During FY 83, Army activities and policies continued to be the subject of frequent litigation. Its personnel policies were again attacked in federal court, and its commercial activities came under close review as a result of the DODs increased emphasis on the debarment and suspension of contractors.

The RELOOK cases, concerning officers released from active duty because of their nonselection for temporary promotion, again provided a significant workload. Fifty-three cases involving 100 plaintiffs in the U.S. Claims Court, 6 cases involving 9 plaintiffs in the U.S. District Court for the District of Columbia, and 20 consolidated cases involving 49 plaintiffs in the U.S. Court of Appeals for the Federal Circuit were pending at the close of the fiscal year.

The Army has settled certain of these cases resolved by earlier decisions, and is litigating issues not previously decided. In *Goble* v. *Marsh* and *Stone* v. *United States*, the Army won significant victories regarding the extent RELOOK plaintiffs can recover pay claims in U.S. district courts. These victories resulted in the transfer of many cases to the U.S. Claims Court and will cause most future cases to be brought there. In *Bockoven* v. *Marsh*, all remaining RELOOK issues went before the U.S. Court of Appeals for the Federal Circuit. The Army won on all issues at the district court level. *Bockoven* may provide definitive resolution to the RELOOK problem because under the Federal Court Improvement Act of 1982, appellate jurisdiction for all RELOOK cases should be in the U.S. Court of Appeals for the Federal Circuit. Further, the Department of Defense is considering a legislative proposal to cure some of the problems created by this litigation.

Although progress has been made in many of the cases arising from Army testing of hallucinogens, several cases remain before the courts. In *Stanley* v. *U.S. et al.*, the district court ruled that Mr. Stanley could bring a suit for money damages against his former military superiors for alleged violation of Mr. Stanley's constitutional rights. Since this decision is inconsistent with the Supreme Court's 1983 decision in *Chappell* v. *Wallace*, which held Navy members could not sue their commanders for money damages for alleged constitutional violations, the Army is appealing the ruling.

Three related cases *Barrett* v. *United States, Barrett* v. *Hoffman*, and *Barrett* v. *Arthur* concerning the death of a civilian after the administration of mescaline as part of an Army research contract received new life when the Second Circuit Court overturned a favorable district court opinion and ordered a trial on the merits.

At the end of the fiscal year, no trial date has yet been established.

In litigation concerning the atmospheric nuclear testing program, *Broudy* v. *United States,* remained the leading case. The *Broudy* decision upheld the *Feres* decision, which precludes suits for injuries received incident to military service. However, the Ninth Circuit Court allowed Mrs. Broudy to file an action for a "post-discharge tort" because the government failed to warn her husband of the continuing dangers of exposure to radiation after he left the service. This new action was pending at the end of the fiscal year. Three other radiation cases were also pending in district court.

Although the United States was dismissed as a party defendant in the "Agent Orange" litigation in a preliminary order in December 1980, the Army has continued to be heavily involved in the case by providing numerous documents relevant to the remaining parties.

The lawsuit challenging the constitutionality of the Army's chaplaincy program because it allegedly violated the First Amendment to the Constitution, *Katcoff* v. *Alexander,* is still pending decision on cross motions for summary judgment.

In sole parent litigation, the only pending case is *Mack* v. *Rumsfeld,* a class action which challenges the Army's policies on the enlistment of sole parents in the Regular Army, the Army Reserve, and the Army National Guard. Army regulations currently proscribe the first-time enlistment of any applicant without spouse, who has a child under 18 years of age, unless the child is placed in the custody of another adult, by court order, or as prescribed by state law, and is not required to pay child support. Extensive discovery, pursued by the plaintiffs, has been completed. The Army renewed its motion for summary judgment in 1983 and is awaiting a decision.

In *Rich* v. *Secretary of the Army, appeal pending,* the plaintiff is a former Army enlisted man who was discharged for fraudulently concealing at the time of his enlistment that he had previously engaged in homosexual acts. The district court ruled in favor of the Army and dismissed the case. Appeal to the Tenth Circuit was pending at the close of the fiscal year. In another case challenging the Army's mandatory policy of discharging homosexuals—*Watkins* v. *Department of the Army*—the district judge rejected the Army's arguments and ordered that Watkins, an admitted homosexual, be reenlisted in the Army. The Ninth Circuit Court reversed the decision, finding Watkins' claims to be nonreviewable. At the end of the fiscal year, two other cases challenging the mandatory discharge of homosexuals were pending—*Matthews* v. *Marsh,* awaiting decision after an

evidentiary hearing, and *Krugler* v. *U.S. Army,* pending filing of a motion for summary judgment.

This year, the Army Civilian Personnel Branch was involved in a number of cases. The plaintiffs petition for a writ of certiorari to the Supreme Court was denied in *A.F.G.E.* v. *Brown.* This left undisturbed the lower court's decision in the Army's favor in the lawsuit, which challenged contracting out under the Commercial Industrial Type Activities program at Fort Gordon, Georgia.

The Army won a significant equal employment opportunity class action victory in *Harris* v. *Marsh,* when the district court denied plaintiffs motion for class certification. Shortly after this decision, forty-four additional individual plaintiffs were permitted to intervene in the lawsuit, which alleges racial discrimination in employment at Fort Bragg, North Carolina. Trial of these individual cases is set to begin in February 1984.

The Eleventh Circuit Court of Appeals reversed the district courts denial of class certification in *Lawler* v. *Alexander.* Although a class has been certified in *Lawler,* the Army is still contesting liability. The district court found for the plaintiffs in *Goldman* v. *Marsh,* and a hearing on relief was pending at the end of the fiscal year. Several other class actions are still pending.

The Army Commercial Branch saw increased activity in terms of both litigation and debarment and suspension during this fiscal year. It soon became evident that the Claims Court and the Court of Appeals for the Federal Circuit, which were created by the Federal Courts Improvement Act on 1 October 1982 intended to keep their dockets current. The Claims Court, exercising its new authority to grant equitable relief prior to award of government contracts, required especially fast responses to motions for injunctions by disappointed bidders. The Commercial Branch achieved much success in defending these cases in both the Claims Court and the district courts. Many of the cases involved challenges to the acquisition of critically needed equipment.

In other significant litigation developments, the case of *Peter Kiewit Son's Co.* v. *U.S. Army Corps of Engineers,* held that the plaintiff must exhaust its administrative remedy available within the Army's debarment process before filing suit.

An increase in both affirmative and defensive environmental litigation occurred including a suit for recovery of the costs of cleaning up contamination resulting from "midnight dumping" on Fort Bragg, and a suit against an Army contractor for allowing the discharge of hazardous chemicals into the groundwater near Saint Paul, Minnesota.

The area of debarment and suspension continued to receive increased emphasis from the Defense Department and Army leadership. In May, the Secretary of Defense directed that each service establish a central point to coordinate and monitor civil, criminal, administrative, and contractual remedies pertaining to fraud by government contractors. In September the Army Management Evaluation Policy Committee decided to give the mission to the Office of the Judge Advocate General. A decision was made to create a separate Contract Fraud Branch within the Litigation Division. At the close of the fiscal year, the division was seeking the resources necessary to create such a branch.

Also this year, the Army eliminated the Special Litigation Branch and transferred its few remaining cases relating to intelligence activities to the Commercial Branch.

In FY 83 a virtual "explosion" occurred in Federal Tort Claims Act (FTCA) litigation, particularly in medical malpractice cases, which increased by 55 percent. All signs point to continuing increase in the future with over 500 administrative claims for medical malpractice currently pending at the U.S. Army Claims Service.

Two cases, *Morris, et al.* v. *United States,* and *Conley, et al.* v. *United States* demonstrate an important development in the malpractice area. Both cases concern claims of malpractice outside the United States, which normally would be barred by the foreign claim exception to the Federal Tort Claims Act. In these cases, however, plaintiffs have alleged negligence by officials at DA level in the staffing of Army Medical Facilities overseas. If these actions are allowed to continue by the Federal Courts, they could open up a new and substantial class of cases previously barred.

There have also been significant developments in the Army Medical Care Recovery program. Efforts to recover cost of medical care in states in which tort liability has been abolished in favor of a no-fault insurance system have encountered serious challenge. The United States has been denied the right to recover under the Kentucky and Georgia no-fault statutes, and those cases are now on appeal to the Sixth and Eleventh Circuit courts, respectively. In prior cases, recovery has been allowed under no-fault laws in New York, Colorado, and Florida, but not in Pennsylvania, Michigan, or North Dakota. A legislative proposal to remedy the situation is scheduled for introduction in the next Congress. Meanwhile the Medical Care Recovery program continues to improve, with FY 83 recoveries expected to surpass FY 82 by half a million dollars.

Government contractor cases with potentially high liability continue to mount. An explosion during the repair of a JP–4 fuel storage tank in Newington, New Hampshire, resulting in two

employee deaths and one serious injury led to multimillion dollar claims in *Audlee* v. *New England Tank Industries et al.*, and related cases. Similarly, an explosion at Radford Army Ammunition Plant, Virginia, which caused serious injury has also resulted in three potentially high liability lawsuits—*Fortney* v. *Envirotech, et al.*

General lawsuits involving unusual and interesting subject-matter could present considerable discovery problems. In *Hohri et al.* v. *United States,* 120,000 Japanese-Americans interned during World War II have sued for $2.5 billion alleging violations of various constitutional rights. In *Price et al.* v. *United States,* plaintiffs claim ownership rights in artwork attributed to Adolf Hitler. The United States acquired possession of these materials at the end of World War II pursuant to the laws of war and international treaty obligations, but plaintiffs now seek to recover them. Both cases may involve discovery of voluminous documents and other materials which go back over forty years.

Lastly, cases abound that arise out of alleged constitutional torts, vehicle accidents, firing range mishaps, and exposure to toxic chemicals. These cases have the potential for significant increases in FY 84.

In FY 83, Army initiative in executing its special functions contributed to the national well being as well as to the development of an Army of Excellence. In FY 83 its planning, engineering, construction and management of water resources saved lives, property, and money, while advancing its ability to respond to mobilization construction missions. Its policies and actions involving environmental pollution problems benefitted the nation's residents, while its energy conservation program ensured the preservation of a mechanized force. The civilian community's concern with the Army's actions in all these areas, however, sometimes led to controversy and litigation. In settling many of these cases, as well as those involving its own personnel policies, the Army made progress this year. As for the RELOOK cases, about officers released from active duty because of their nonselection for temporary promotion, the Department of Defense began to consider legislation to cure some of the problems created by this litigation.

12

Conclusion

By the close of FY 83, the Army had made notable progress in achieving the goals General Meyer established for it at the beginning of the fiscal year when he stated that the Army was headed "toward a quality Army—well trained, disciplined and combat-ready." The Active Army succeeded in meeting both qualitative and quantitative recruitment and reenlistment goals due in large measure to the combination of bonuses and educational benefits available to enlistees, in addition to pay increases. For the first time in a decade, military pay approached a level of comparability with the private sector. Another step toward excellence was the deployment of COHORT companies overseas as unit replacements. Training had significantly improved in FY 83 and with it combat readiness. Both active and reserve components received realistic training at the National Training Center in Fort Irwin, California, and through a variety of programs—video disc, computer generated imagery, and laser systems that provided combat simulation. Selected officers at Fort Leavenworth, Kansas, received an additional course in contingency planning and combined arms integration at the Combined Arms and Services Staff School (CAS^3).

As part of its modernization program, the Army developed and fielded top quality weapons and support systems. Among the new weapons introduced in Europe this year were the M1 Abrams tank, the Bradley Infantry Fighting Vehicle, the Black Hawk helicopter, and improved air defense systems, such as the Patriot, the Stinger, the Improved Hawk, the Chaparral, and the DIVAD gun. Several division units, which used new weapons, converted to new organizational structures. The Army implemented the Air-Land Battle, which exploits the potential inherent in modern weaponry, and thus advanced the development of tactical doctrine. It increased its fighting and sustaining power by activating new combat and combat support units, such as the 1st Special Operations Command and communications and intelligence units. Reserve units received first-line equipment in accordance with their assigned priority for deployment using a "first to fight, first-equipped" philosophy. Mobilization efforts resulted in mobilization master plans and installation support books for mobilization facilities. Negotiations continued for further expansion

of European host-nation support, which is essential to sustaining the combat capability of our land forces. Finally, active participation in a series of initiatives to reduce all but essential expenditures resulted in over $1.4 billion in efficiencies and economies during the FY 81–83 period with a $10.1 billion follow-on effect for the FY 84–89 period. The Army's commitment to excellence had produced striking and tangible improvements.

By the end of the fiscal year, the Army also was aware of its deficiencies and was mindful of the challenges to come. Shortfalls existed in its ability to mobilize quickly adequate manpower with specialized skills. Some Reserve Component forces had not met the desired standard of readiness, especially combat service support units. The strength level of the Individual Ready Reserve, although improving, remained unsatisfactory. Strategic lift was inadequate to deploy Army forces fast enough to meet the expected wartime needs. Pre-positioned unit sets of equipment likewise were not enough to accommodate follow-on forces. War reserve stocks to replace anticipated combat losses were too little. As were highly mobile, light infantry forces and special operations forces. Chemical deterrence was inadequate, chemical retaliatory capability was weak, and decontamination capability sufficient.

Despite its deficiencies, the Army had most of the ingredients it needed for an Army of Excellence. In fiscal year 1984, it will assimilate them and with congressional support tackle its shortfalls and continue to prepare and train itself for the task of defending the nation.

Glossary

AA/AB	Air assault/airborne division
AAFES	Army and Air Force Exchange Services
AALISS	Army Automated Library and Information Support System
A and T	Assignments and Terminations module
AAO	Affirmative Action Officer
AAOTF	Army Agent Orange Task Force
AAWS	Advanced antitank weapon system
ABCA/QWG	American, British, Canadian, and Australian Quadripartite Group
AC	Active Component
ACCES	Army Civilian Career Evaluation System
ACCS	Army Command and Control System
ACE	Airframe Condition Evaluation
ACE	Assistant Chief of Engineers
ACE	Armored Combat Earthmovers
ACEB	Army Clothing Equipment Board
ACES	Army Continuing Education System
AC 2MP	Army Command and Control Master Plan
ACP	Asset Capitalization Program
ACS	Army Community Service program
ACSC	Army Computer System Command
ACSI	Assistant Chief of Staff for Intelligence
ACT	Advanced Concepts and Technology
ACTEDS	Army Civilian Training Education and Development System
ADABAS	Adaptable Data Base System
ADAPCP	Alcohol and Drug Abuse Prevention and Control Program
ADEA	U.S. Army Development and Employment Agency
ADP	Automatic data processing
AE	Architectural and engineering firms
AFAPS	Artillery-Fired Atomic Projectiles
AFATDS	Advanced Field Artillery Tactical Data System
AFH	Army family housing
AFMCO	Army Force Modernization Coordination Office
AFQT	Armed Forces Qualification Test

AFRC	Armed Forces Recreation Center
AFSS	Automatic Fire Suppression System
AHIP	Army Helicopter Improvement Program
AHMD	Army Housing Management Division
AGT	Aircraft Gas and Turbine
AIF	Army Industrial Fund
AJ	Antijamming
AJCC	Alternate Joint Communications Center
ALBE	Airland Battlefield Environment Thrust
ALMC	Army Logistics Management Center
ALMO	Army Library Management Office
AMEDD	Army Medical Department
AMIM	Army Modernization Information Memorandum
AMIP	Army Models Improvement Program
AMSP	Advanced Military Studies Program
AMT	Army Modernization Training
AMWRF	Army Morale Welfare Recreation Fund
ANVIS	Aviator's Night Vision Imaging System
AOA	Airborne Optical Adjunct study
AP	Antipersonnel
APCs	Armored Personnel Carriers
APG	Aberdeen Proving Ground
APOs	Areal Post Offices
AR	Army Regulation
ARNG	Army National Guard
ARSTAF	Army staff
ARTEP	Army Training and Evaluation Program
ARVN	Army Republic of Vietnam
ASA	Assistant Secretary of the Army
ASA (IL&FM)	Assistant Secretary of the Army for Installations, Logistics, and Financial Management
ASARC	Army System Acquisition Review Council
ASAS	All Source Analysis System
ASB	Army Science Board
ASF	Army Stock Fund
ASIOE	Associated Support Items of Equipment
ASMSA	Army Strategic Mobility System Assessment
ASQT	Armed Services Qualification Test
ASVAB	Armed Services Vocational Aptitude Battery
AT	Antitank
AT	Active Duty for Training

ATRRS	Army Training Requirements and Resources Systems
AUSA	Association of the United States Army
AVSCOM	Aviations Systems Command
AWOL	Absent without Leave
BAS	Battlefield Automated Systems
BAST	Board on Army Science and Technology
BDO	Battle Dress Overgarment
BDU	Battle Dress Uniform
BERH	Board of Engineers for Rivers and Harbors
BETA	Battlefield Exploitation and Target Acquisition project
BFVS	Bradley Fighting Vehicle System
BLAST	Building Loads Analysis and System Thermodynamics
BMAR	Backlog of Maintenance and Repair
BMD	Ballistic Missile Defense
BMDATC	Ballistic Missile Defense Advanced Technology Center
BMDO	Ballistic Missile Defense Organization
BMDSCOM	Ballistic Missile Defense Systems Command
BOA	Basic ordering agreement
BOIP	Basis of Issue Plan
BRIGHT STAR	Army training exercise in Europe
BTA	Best technical approach
BTC	Basic Technical Courses
BZ	3-quinuclidinyl benzilate
CA	Civil Affairs
CA	Commercial Activities
CAA	Conference of American Armies
CABER TOSS	91D field training exercise
CACDA	Combined Arms Combat Development Activity
CAEADS	Computer-Aided Engineering and Architectural Design System
CAI	Centralized Accident Investigation team
CAMDS	Chemical Agency and Munition Disposal System
CAPSTONE	A procedure aligning reserve component units scheduled for Europe with their wartime chain of command

CAS³	Combined Arms and Services Staff School
CBP	Central Banking Program
CCF	Central Personnel Security Clearance Facility
CDC	Center for Disease Control
CDEC	Combat Developments Experimentation Command Board
CDIP	Combined-defense improvement projects program
CDS/YA	Child development services and youth activities
CEETA	Defense Communications Electronics Evaluation Testing Agency
CEMOPS	Corps of Engineers Mobilization and Operations Planning System
CERF	Corps of Engineers Reserve Fleet
CERL	Construction Engineering Research Laboratory
CERLA	Comprehensive Environmental Response, Compensation, and Liability Act. Better known as "Superfund."
C-FLEX	Cobra Fleet Life Extension program
CFMP	Civilian Force Management Plan
CFV	Cavalry Fighting Vehicle
CGSO	Command and General Staff Officer
C³I	Command, control, communications, and intelligence requirements
CINCUSAREUR	Commander in Chief, U.S. Army Europe
CISM	Conseil International du Sport Militaire competitions
CMFs	Career Management Forces
CMI	Centralized Mishap Investigation program
CMSS	Collection Management Support System
CNPO	Central NAF Payroll Office
COCADA	Containerized Cargo Distribution Analysis
COE	Corps of Engineers
COEA	Cost and Operational Effectiveness Analysis
COHORT	Cohesion, operational readiness, and training
COLA	Cost of living adjustments
COLD WEATHER EXPRESS	Army training exercise

CONUS	Continental United States
CP	Chemical protective overgarment
CRAZY HORSE	System designed to satisfy selected intelligence collection requirements at the echelon above corps for theaters throughout the world
CSA	Chief of Staff of the Army
CSB	Closely speed basing
CS/CSS	Combat Support/Combat Service Support
CSWS	Corps Support Weapon System
CUCV	Commercial utility and cargo vehicles
C4	Command, Control, Communications, and Computers
DA	Department of the Army
DAIG	Department of the Army Inspector General
DAMMS	Department of the Army Movement Management Systems
DARCOM	U.S. Army Materiel Development and Readiness Command
DAS3	Decentralized Automated Service Support System
DAS	Director of the Army Staff
DASPS–E	Department of the Army Standard Port System Enhanced
DATS	Drill and Transfer System
DC	Dichloro
DCPC	Direct Combat Probability Coding System
DCSOPS	Deputy Chief of Staff for Operations and Plans
DCSPER	Deputy Chief of Staff for Personnel
DCSRDA	Deputy Chief of Staff for Research, Development, and Acquisition
DDT	Doctrine and Tactics Training
DEH	Directorate of Engineering and Housing
DEOMI	Defense Equal Opportunity Management Institute
DET	Displaced Equipment Training
DIA	Defense Intelligence Agency
DISPLAY DETERMINATION	Overseas training exercise
DIVAD	Division Air Defense
DLA	Defense Logistics Agency
DLI	Defense Language Institute
DNA	Defense Nuclear Agency

DOD	Department of Defense
DOPMA	Defense Officer Personnel Management Act
DRVT	Deployment Readiness Verification Test
DS	Division set
DSCS	Defense Satellite Communications System
DS/GS	Direct Support/General Support concept
DSTV	Direct support team vehicle
EA	Economic Analysis
EAA	Engineer Assistance Agreement program
ECIP	Energy Construction Investment Program
ECONPACK	An Assistant Chief of Staff automated program
EEMI	Economies, Efficiencies, and Management Improvement
EEOC	Equal Employment Opportunity Commission
EFM	Exceptional Family Member program
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
ELAC	Echelons above corps
EMP	Electromagnetic Pulse (detection)
EMR	Electromagnetic radiation
ENSCE	Enemy Situation Correlation Element
EO	Equal Opportunity
EO NCOs	Equal Opportunity noncommissioned officers
EPA	Environmental Protection Agency
EPOS	Electronic Processing and Dissemination System
EPUT	Engineering Prototype Unit Test
ESSS	External stores support system
ETL	Engineer Topographic Laboratories
ETS	Expiration of Term of Service
ETUT	Enhanced Tactical Users Manual
EURCOR	European Commissary Region
EUSA	Eighth U.S. Army
FAA	Federal Aviation Authority
FAASV	Field Artillery Ammunition Support Vehicle
FACT	Family Action Coordination Team
FANS	Friendly/Allied Nation Support program
FAO	Foreign Area Officer
FAP I	Force Alignment Plan 1

FAS	Force Accounting System
FASTAB	Field Artillery Surveillance and Target Acquisition Battery
FAV	Field Assistance Visitation
FDS	Field Dressing Station
FEMA	Federal Emergency Management Agency
FISTV	Fire Support Team Vehicle
FLIN	Federal Library Information Network
FLIR	Forward looking infrared
FLRA	Federal Labor Relations Authority
FMIAS	Force Management Impact Analysis System
FMMP	Force Modernization Master Plan
FMS	Foreign Military Sales program
FOA	Field Operating Agency
FOCUS 21	Process to develop a joint Army and Air Force future concept based on Air-Land Battle 2000 and Air Force 2000
FOIA	Freedom of Information Act
FORDIMS	Force Development Integrated Management System
FORSCOM	U.S. Army Forces Command
FPAO	Force Planning Analysis Office
FPOs	Federal Post Offices
FPW	Firing Port Weapon
FPWs	Facility planning worksheets
FRG	Federal Republic of Germany
FSAS	Force Structure Analysis System
FSD	Full-scale development
FSED	Full-Scale Engineering Development
FSPs	Facility support plans
FST/FSS	Fire Support Terminal and Fire Support System
FTCA	Federal Tort Claims Act
FUED	First Unit Equipped Date
FWCA	Fish and Wildlife Coordination Act
FWS	Fish and Wildlife Service
FY	Fiscal Year
GAO	General Accounting Office
GEMSS	Ground Emplaced Mine Scattering System
GLCM	Ground-launched cruise missiles
GLLD	Ground Laser Locator Designator
GMFSC	Ground Mobile Forces Satellite Communications program

GPO	Government Printing Office
GR	Graves registration
GRAINY HIDE	Project designed to assess the capabilities of national intelligence systems to support tactical intelligence requirements
GSA	General Services Administration
HALO	High altitude, low opening parachute jumps
HELP	Howitzer Extended Life Program
HEMTT	Heavy expanded mobility tactical truck
HG	High grade
HMMS	Hellfire Missile System
HMMWV	High Mobility Multipurpose Wheeled Vehicle program
HNS	Host-nation support
HOMES	Housing Operations Management System
HQDA	Headquarters Department of the Army
HRD	Human Resources Directorate
HRS	Housing Referral Services
HSC	Health Services Command
HTLD	High Technology Light Division
HTMD	High Technology Motorized Division
HTTB	High Technology Test Bed
HUMINT	Human Intelligence
HVAC	Heating, Ventilating, and Air Conditioning
ICBMs	Intercontinental ballistic missiles
ICC	International Communications Commission
IFP	International Fellow Program
IFV	Infantry Fighting Vehicle
IHFR	Improved High Frequency Radio
IG	Inspector General
I KPT	Instructor and Key Personnel Training
ILS	Integrated Logistics System
IMA	Individual Mobilization Augmentees/ Augmentation
IMETP	International Military Education and Training Program
IMETP-TLA	International Military Education and Training Program-Travel and Living Allowance
IMIP	Industrial Modernization Incentives Program

IMWRF	Installation MWR Fund
INF	Intermediate-Range Nuclear Forces
ING	Inactive National Guard
INSCOM	Intelligence and Security Command
INTELPOST	A system to bring personal mail delivery and dispatch into the 21st century through satellite communication
IOC	Initial operational capability
IPPR	Initial Production Readiness Reviews
IPR	In-Process Review
IPS	Interim Permanent Secretariat
IPT	Initial production testing
IRB	Individual Record Brief
IRM	Information Resource Management
IRR	Individual Ready Reserve
ISBs	Installation support books program
ISP	Information System Planning study
ISR	In-Service Recruiting program
ISU	Installation Support Units
ITV	Improved TOW Vehicle
ITT	International Telephone & Telegraph
IWR	Institute for Water Resources
JACADS	Johnston Atoll Chemical Agent Disposal System
JAG	Judge Advocate General
JCS	Joint Chiefs of Staff
JOINT STARS	Joint Surveillance and Target Attack Radar System
JPO	Joint Program Committee
JSEP	Job Skills Education Program
JTACMS	Joint Tactical Missile System
JTFP	Joint Tactical Fusion Program
JVX	Joint Advanced Vertical Lift Aircraft
LAB	Light Attack Battalion
LACV–30	A lighter, air cushion vehicle company
LASER MACE	91D field training exercise
LCC	Logistics Coordination Cells
LCCS	Life Cycle Software Support program
LHX	Light helicopters experimental aircraft
LIIP	Line Item Improvement Program
LLC	Limited life component
LLT	Long Lead Time
LMIB	Light Motorized Infantry Battalion
LMSC	Lockheed Missile and Space Corporation

LOGEX	Training exercise
LOTS	Logistics over the shore program
LRIP	Low Rate Initial Production
LTAMR	Long-Term Airlift Modernization Report
"M" drawings	Mobilization facilities designs
MAB	Marine Amphibious Force Brigade
MACOM	Army Major Command
MAF	Marine Amphibious Force
MAPEX	Map Exercise
MAPs	Military Assistance Programs
MARKS	Modern Army Record-Keeping System
MCA	Military Construction, Army
MCAR	Military Construction, Army Reserve program
MCS	Maneuver Control System
MCTNS	Manportable Common Thermal Night Sights
MFO	Multination Force and Observers
MFP	Materiel fielding plan
MI	Military Intelligence
MICNS	Modular Integrated Communications and Navigation System
MICOM	Missile Command
MIDEASTFOR	Naval Middle East Force
MLRS	Multiple launch rocket system
MMIP	Maintenance Management Improvement Program
MMPs	Mobilization Master Plans
MMW	Millimeter wave
MOB ARPRINT	Mobilization Army Program of Individual Training
MOBEX	Training exercise
MOBPERS	Mobilization Personnel Processing System
MOS	Military Occupational Specialty
MOU	Memorandum of Understanding
MPSA	Military Postal Service Agency
MQS–I	Military Qualification Standards I
MS 3	Munition Systems Support Structure
MRE	Meals, Ready-to-Eat
MTMC	Military Traffic Management Command
MTOE	Modification Table of Organization and Equipment
MWR	Morale, welfare, and recreation programs and services for Army soldiers and their families

NAAG	NATO Army Armaments Group
NAC	Navigation Analysis Center
NADs	National Armaments Directors
NAF	National Armed Forces
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organization
NBC	Nuclear, biological, and chemical
NCO	Noncommissioned officer
NCOES	Noncommissioned Officer Education System
NET	New Equipment Training
NGB	National Guard Bureau
NIOSH	National Institute of Occupational Safety and Health
NIP	Nonindustrial facilities
NM	Nautical miles
NNK	Nonnuclear kill technique
Non-ETS	Non-Expiration of Term of Service
NORAD	North American Aerospace Defense Command
NPRC	National Personnel Records Center
NPS	Nonprior Service
NRC	Nuclear Regulatory Commission
NSA	National Security Agency
NSNF	Nonstrategic Nuclear Forces
NSWC	Naval Surface Weapons Center
NTC	National Training Center
NTPF	Near Term Pre-position Force
NTPR	Nuclear Test Personnel Review
OACE	Office of the Assistant Chief of Engineers
OACSI	Office of the Assistant Chief of Staff for Intelligence
OASA (MRA)	Office of the Assistant Secretary of the Army, Manpower and Reserve Affairs
OBC	Officer Base Courses
OCCH	Office of the Chief of Chaplains Handbook
OCE	Office of the Chief of Engineers
OCE	Office of the Chief of Engineers/ Headquarters, U.S. Army Corps of Engineers (dual office)
OCLC	Online Computer Library Center
OCM	On Condition Maintenance
OCS	Officer Candidates School

ODCSLOG	Office of the Deputy Chief of Staff for Logistics
ODCSOPS	Office of the Deputy Chief of Staff for Operations and Plans
ODCSPER	Office of the Deputy Chief of Staff for Personnel
ODCSRDA	Office of the Deputy Chief of Staff for Research, Development, and Acquisition
ODT	Overseas Deployment Training
OEMPS	Officer and Enlisted Personnel Management System
OJCS	Office of the Joint Chiefs of Staff
O & MA	Operation and Maintenance Activities
OMB	Office of Management and Budget
OPA	Army procurement program
OPM	Office of Personnel Management
OSARIM	Office of the Special Assistant to the Director of the Army Staff for Information Resource Management
OSB	Officer Selection Battery
OSD	Office of the Secretary of Defense
OSD PIF	Office of the Secretary of Defense Productivity Investment Funding
OSHA	Occupational Safety and Health Act
OSI	Office of Special Investigation
OUSDRE	Office of the Undersecretary of Defense for Research and Engineering
PA	Procurement Appropriation
PAC	Professional and administrative career occupations
PACCAR	Pacific Car and Foundry Company
PACE	Professional and Administrative Career Examination
PAD	POMCUS Authorization Document
PADS	POMCUS Authorization Documents System
PAEO	Program Analysis and Evaluation Office
PAVER	An on-line, interactive decision support system to assist pavement maintenance managers in the Army, Air Force, and Navy to program their maintenance activities for roads, streets, and airfields so that they can extend the service life of the

	pavement and use to best advantage the limited funds available for such maintenance (Pavement Maintenance Management System).
PAX	Programming, Administration, and Execution System
PCB	Polychlorinated bipheyl
PD	Purchase description
PDIP	Program Development Increment Package
PDSS	Post Development Software Support
PDW	Personal Defense Weapon
PE	Program element
PEP	Personnel Exchange Program
PFD	Personal Flotation Devices
PIa	Pershing Ia missile
PII	Pershing II missiles
PL	Public Law
PLRS	Position Locating Reporting System
PMF	Personnel Master File
PM-NUC	Project Manager for Nuclear Munitions
PMP	Program Management Plan
PMS	Professor of Military Science
PMS	Performance Monitoring System
PMTBOR	Post mobilization training base output requirement
POD	Pacific Ocean Division
POM	Programmed Objective Memorandum
POMCUS	Pre-positioned materiel configured to units sets
POST	Passive Optical Seeker Technique
PPBERS	Program Performance and Budget Execution Review System
PPBES	Planning, Programming, Budget, and Execution System
PR	Periodic Reinvestigations
PROUD SABER	Training exercise
PTC	Primary Technical Courses
PTSD	Post Traumatic Stress Disorder
PX	Post exchange
QRIP	Quick Return on Investment Program
QRMC	Quadrennial Review of Military Compensation
QRP	Quick Reaction program

RAM	Reliability, Availability, and Maintainability study
RC	Reserve Component
RCF	Repair Cycle Floats
RCIA	Rite for Continuing Instruction of Adults
R&D	Research and Development
RDTE	Research, development, test, and evaluation program
REDTRAIN	Tactical Intelligence Readiness Training program
REFORGER	Training exercise
REMR	Repair, evaluation, maintenance, and rehabilitation research program
RFP	Request for Test Samples
RFTS	Request for Test Samples
RMA	Rocky Mountain Arsenal
RMC	Resource Management Corporation
RMP	Reprogrammable Microprocessor
RMTC	Regional Military Training Center
ROK	Republic of Korea
ROM	Read Only Memory
ROTC	Reserve Officers' Training Corps
RPMA	Real Property Maintenance Activities
RPV	Remotely Piloted Vehicle
RSS	Rosette Scan Seeker
SA	Secretary of the Army
SACS	Structure and Composition System
SAG	Saudi Arabian government
SAM	Stationing analysis mode
SAMPAM	System for Automation of Materiel Plans for Army Material
SANG	Saudi Arabian National Guard
SARIM	Special Assistant to the Director of the Army Staff for Information Resource Management
SCCE	Satellite Communications Control Elements
SCOTT	Single Channel Objective Tactical Terminal
SCS	Special Communication Systems
SDAF	Special Defense Acquisition Fund
SDI	Strategic Defense Initiative
SELCOM	Joint Select Committee
SEMA	Special electronics intelligence mission
SES	Senior Executive Service employees

SES4WAR	New Army computer system
SHAPE	Supreme Headquarters Allied Powers, Europe
SIDPERS	Standard Installation Division Personnel System
SIGINT	Signal Intelligence Division of the Office of the Assistant Chief of Staff for Intelligence
SINCGARS	Single Channel Ground and Airborne Radio System
SNEP	Saudi Naval Expansion Program
SOCOM	Special Operations Command
SOCP	Saudi Arabian Army Ordnance Corps Program
SOF	Special Operations Forces
SOFAs	Status of Forces Agreements
SOFMAA	SOF Mission Area Analysis
SOLFEAS	Solar Energy System Economic Feasibility program
SOR	Joint Service Operational Requirement
SPBS	Standard Property Book System
SPLLS	Self-Propelled Launcher Loaders
SQT	Software Qualification Test
SRB	Selective Reenlistment Bonus
SRC	Standard Requirements Code
SRINF	Shorter-Range Intermediate Nuclear Forces
SRNF	Short-Range Nuclear Forces
SRV	Socialist Republic of Vietnam
SSN X REF	Standard Study Number Cross Reference file
ST	Sustainment Training
STARC	State Area Commands
START	Proposed reduction in ballistic missile warheads and limits on deployed ICBMs and heavy bombers
STF	Specal Task Force
STRAC	Standards in Training Commission
SUSV	Small unit support vehicle
TAA	Total Army Analysis
TAA 90	Army analyzed and programmed major force structure initiatives regarding its light force
TAADS	The Army Authorization Documents System

TACFIRE	Tactical Fire Direction System
TACIES	Tactical Imagery Exploitation System
TACOM	Tank Automative Command
TACSATCOM	Tactical Satellite Communications program
TACSIM	Tactical Simulation Program
TADs	Training aids and devices
TADS/PNVS	Target acquisition designation system and pilot night vision sensors
TAEDP	Total Army Equipment Distribution Program
TAEDP ASIOE	Total Army Equipment Distribution Program, Associated Support Items of Equipment
TAG	The Adjutant General
TAGO	The Adjutant General's Office
TAOAP	Total Army Officer Accession Plan
TASAPS–77	"The Army Security Assistance Program Study" report
TCAC	Technical Control and Analysis Center
TC ACCIS	Transportation Coordinator, an Automated Command and Control Information System
TCATA	The Command and Control Test Division
TDA	Tables of Distribution and Allowances
TDY	Temporary Duty
TEAM SPIRIT	Training exercise
TEMP	Test and Evaluation Master Plan
TEMPEST	Computer Terminal
TENCAP	Tactical Exploitation of National Capabilities
Ten-Tom	Tennessee-Tombigbee Waterway project
TGSM	Terminally guided submunition
TGW	Terminal Guidance Warhead
THS	Transient, holdees, and student account
TLA	Travel Living Allowance
TLAT	TOW Light Antitank Battalion
TOEs	Tables of organization and equipment
TOW	Tube launched, optically tracked, wire guided
TRACE	Total risk assessing cost estimates
TRADOC	U.S. Army Training and Doctrine Command
TRADOC–SATFA	U.S. Army Training and Doctrine Command-Security Assistance Training Field Activity

TRDI	Technical Research and Development Institute
TRD/TIPS	Test requirements documents and test program site
TRI–TAC	Joint Tactical Communications program
TROJAN	Field training exercise
TSC	Test score category
TSWG	Training Support Work Group
TTS	Tank thermal sight
UCMJ	Uniform Code of Military Justice
UPDATE	Unlimited Potential Data Through Automation Technology in Education. Publishing technique used for all Army publications
UPH	Unaccompanied Personnel Housing
URCS	Uniform Rail Costing System
USACAA	U.S. Army Concepts and Analysis Agency
USACE	U.S. Army Corps of Engineers
USAFAC	U.S. Army Finance and Accounting Center
USAMSSA	U.S. Army Management Systems Support Agency
USAR	U.S. Army Reserve
USAREC	U.S Army Recruiting Command
USAREUR	U.S. Army, Europe
USARJ	U.S. Army, Japan
USARSA	U.S. Army School of the Americas
USC	United States Code
USCENTCOM	U.S. Central Command
USDRE	Undersecretary of Defense for Research and Engineering
USEUCOM	United States European Command
USO	United Service Organizations
USPS	U.S. Postal Service
USSS	U.S. Secret Service
VA	Veterans Administration
VE	Value Engineering program
VEAP	Veterans Educational Assistance Program
VFDMIS	Vertical Force Development Management Information Systems
VIABLE	Vertical Installation Automated Baseline; an automated data processing resource computer

VIP	Very important person
WES	Waterways Experiment Station
WESTCOM	Western Command
WINTEX-CIMEX	JCS-sponsored mobilization exercise
WRSC–D	Water Resources Support Center-Director
WTCV	Weapons and tracked combat vehicles
YMCA	Young Men's Christian Association

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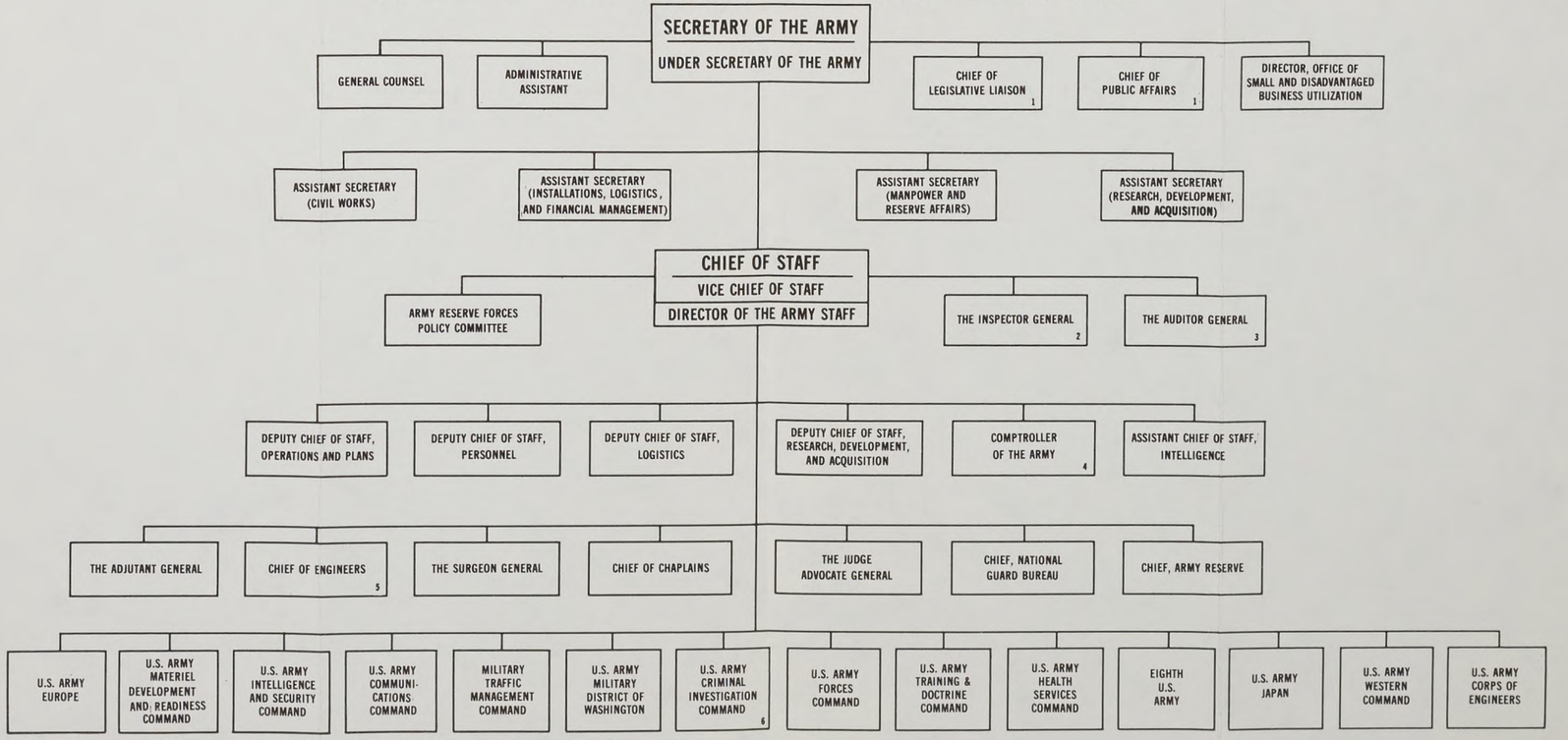
Appendix. ORGANIZATION OF THE DEPARTMENT OF THE ARMY



1. THE CHIEF OF LEGISLATIVE LIAISON AND THE CHIEF OF PUBLIC AFFAIRS REPORT DIRECTLY TO THE SECRETARY OF THE ARMY AND ARE RESPONSIBLE TO THE CHIEF OF STAFF.
2. THE INSPECTOR GENERAL SERVES AS THE CONFIDENTIAL REPRESENTATIVE OF, AND REPORTS DIRECTLY TO, THE SECRETARY OF THE ARMY AND TO THE CHIEF OF STAFF UPON THE MORALE, DISCIPLINE, EFFICIENCY, AND ECONOMY OF THE ARMY.
3. THE AUDITOR GENERAL REPORTS DIRECTLY TO THE CHIEF OF STAFF WITH CONCURRENT RESPONSIBILITY TO THE SECRETARY OF THE ARMY.
4. THE COMPTROLLER OF THE ARMY IS UNDER THE DIRECTION AND SUPERVISION OF, AND IS DIRECTLY RESPONSIBLE TO, THE ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS, AND FINANCIAL MANAGEMENT), WITH CONCURRENT RESPONSIBILITY TO THE CHIEF OF STAFF.
5. THE CHIEF OF ENGINEERS REPORTS THROUGH THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS) TO THE SECRETARY OF THE ARMY ON CIVIL WORKS MATTERS AND COMMANDS THE U.S. ARMY CORPS OF ENGINEERS.
6. THE COMMANDER, U.S. ARMY CRIMINAL INVESTIGATION COMMAND, REPORTS DIRECTLY AND CONCURRENTLY TO THE SECRETARY OF THE ARMY AND TO THE CHIEF OF STAFF ON CRIMINAL INVESTIGATION MATTERS.

AS OF 30 SEPTEMBER 1983

PIN: 067613–000