United States General Accounting Office

GAO

Report to the Chairman, Committee on
the Budget, House of Representatives

June 1998

DEFENSE INFRASTRUCTURE

Central Training Funding Projected to Remain Stable During 1997-2003

GAO

B-278555

June 30, 1998

The Honorable John R. Kasich
Chairman, Committee on the Budget
House of Representatives

Dear Mr. Chairman:

The Department of Defense's (DOD) budget request for fiscal year 1999 includes about $20.1 billion (in fiscal year 1998 dollars) for formal training and education of military and civilian personnel, referred to as central training, or about 8 percent of DOD's fiscal year 1999 budget. Central training is the third largest of eight DOD infrastructure categories, and accounts for 14.4 percent of the $139.6 billion (in fiscal year 1998 dollars) that the Department has budgeted for infrastructure in fiscal year 1999.[1]

Because central training activities represent a significant part of DOD's infrastructure, you requested that we identify trends in central training funding and causes for those trends. You also requested that we identify DOD's initiatives to reduce central training funding requirements or improve the effectiveness and efficiency of central training programs and DOD's management of those initiatives.

Our work was based primarily on data from the fiscal year 1998 and earlier Future Years Defense Programs (FYDP) because the fiscal year 1999 FYDP did not become available until after we had completed our detailed analyses. Our preliminary analysis of the fiscal year 1999 FYDP identified significant reductions in central training infrastructure funding. We believe this report represents an excellent baseline to evaluate projected changes in the central training infrastructure budget resulting from DOD's 1997 Quadrennial Defense Review and DOD cost saving initiatives. We plan to further analyze the changes in the fiscal year 1999 FYDP, determine DOD's rationale for them, and determine DOD's plans for implementing these changes.

This report highlights trends in the central training infrastructure that Congress can use in its deliberations on the Defense budget and the direction of Defense central training programs and initiatives. We present service trends and their explanations for those trends. We did not validate

---

[1]DOD defines infrastructure as activities that provide support services to mission programs and primarily operate from fixed locations. The other infrastructure categories are installation support; acquisition infrastructure; central logistics; central medical; central personnel; central command, control, and communications; and force management.

the services' explanations for the trends, although they generally appear to be consistent with the trends. Nor did we compare trends across the services because the training categories do not contain the same programs and activities within each service, and this might distort the comparisons.

Background

Since its Bottom-Up Review in 1993, DOD has repeatedly stated that it must reduce its infrastructure to offset the cost of future modern weapon systems. Our analysis of DOD's FYDPs for fiscal years 1996, 1997, and 1998 showed that DOD continued to allocate about the same percentage of its budget for infrastructure activities as it did at the time of the Bottom-Up Review and that planned funding increases for weapon systems had repeatedly been shifted further into the future with each succeeding FYDP.[2]

In its May 1997 Report of the Quadrennial Defense Review, DOD recognized that the downsizing of its infrastructure had fallen behind the downsizing of its force structure. In that report, DOD proposed some actions to reduce its infrastructure, including personnel reductions, base closures and realignments to reduce additional excess facilities, and streamlined operations. Actions and initiatives as a result of the Quadrennial Defense Review were to be reflected in the fiscal year 1999 budget and FYDP for fiscal years 1999-2003.

Central training programs include individual training activities such as new personnel training, skill and proficiency training, initial pilot and navigator training, management of the central training system, and the support of central training installations. These programs provide training for active military personnel, reserve component personnel, and DOD civilians. These programs are categorized by DOD for budgetary purposes as follows: (1) administrative support, (2) installation support, (3) command managed training programs, (4) general central training, (5) training of new personnel, (6) officer training and academies, (7) aviation and flight training, and (8) professional and skill training. Although DOD categorizes health personnel training in its central medical infrastructure category, we included it in our analysis because it is nonunit training. The central training categories are described in appendix I.

---

[2]Future Years Defense Program: DOD's 1998 Plan Has Substantial Risk in Execution (GAO/NSIAD-98-26, Oct. 23, 1997); Future Years Defense Program: Lower Inflation Outlook Was Most Significant Change From 1996 to 1997 Program (GAO/NSIAD-97-36, Dec. 12, 1996); Defense Infrastructure: Costs Projected to Increase Between 1997 and 2001 (GAO/NSIAD-96-174, May 31, 1996); and Future Years Defense Program: 1996 Program Is Considerably Different From the 1995 Program (GAO/NSIAD-95-213, Sept. 15, 1995).

Most central training activities are managed by the services' major training commands and conducted at the commands' training installations. According to DOD and service training officials, although these commands do not manage the military personnel appropriations portion of central training funds (used for instructor and student salaries), the commands are responsible for course operations (i.e. the development of course curricula, course books and supplies, etc.); the maintenance of training facilities; and the administration of the training programs.

Central training is different from unit mission training. Unit mission training is undertaken by operational units to maintain the units' required readiness in their primary combat, combat support, or combat service support missions. Central training is the training of individual military members in formal courses.

The services consider a number of factors in formulating their central training requirements. Factors include projected authorized end strength, losses in each occupational specialty/category by grade and years in grade, accessions, promotions, and reenlistments. Therefore, a change in end strength levels may not lead to a proportional change in training requirements. For example, higher than expected separation rates may require increased training requirements despite programmed lower personnel levels. The services compile "training workload" to determine resources (people, funds, material, and facilities) required to conduct training. Training workload measures the output (work years) of the services' institutional training programs.

Most funds for central training are derived from DOD's military personnel and operation and maintenance appropriation categories. Appendix II describes the distribution of funds for each training category.

Results in Brief

Funding for central training activities declined between fiscal year 1992 and 1997 by almost $4.5 billion.[3] A combination of factors led to this decline. During this period, the services reduced accessions to meet lowered personnel levels, closed and consolidated training installations, and outsourced base maintenance. Decreases in Navy and Army central training programs accounted for about 90 percent of the decline.

[3]Unless otherwise stated, the dollar values shown in this report are in constant 1998 dollars and on a fiscal year basis.

No additional funding decline was programmed through 2003 in the 1998 FYDP. From 1997 through 2003, funds were projected to remain stable at about $21.5 billion. Hence, DOD did not project further savings from this infrastructure category to help pay the cost of future modern weapon systems.

The projected stability in overall funding after 1997 was primarily a result of several projections, including (1) relatively steady state military personnel levels; (2) relatively steady state accessions after having increased considerably at the end of the earlier period; (3) continued funding declines in professional and skill training, installation support, and the training of new personnel; and (4) funding increases in command managed training and aviation and flight training. The Navy and the Army accounted for most of the projected decrease in the professional and skill training category. The Navy transferred funding for several programs from this category to the command managed training category and reduced workloads. The Army planned to consolidate and restructure professional and skill training courses to reduce training time and expand the use of technology. Installation support for all of the services was projected to be lower in 2003 than in 1997 because they planned to continue to outsource and replace military personnel with civilians to perform base maintenance. The projected funding increases were due primarily to projected increases in aviation training workload for the Air Force, the Navy, and the Army, and the purchases of the Joint Primary Aircraft Training System by the Air Force and the Navy.

Funding for central training was highly concentrated in three training categories—professional and skill training, command managed training, and installation support. These three categories received and were projected to receive almost two-thirds of DOD's central training funds over the 1992-2003 period. Funding for all three categories declined through 1997. Although funding was projected to continue to decline for professional and skill training and installation support, funding for command managed training was projected to increase because of growth in Air Force and Navy programs.

The Army had the largest share of training funds, about one-third of the total. The Air Force was projected to overtake the Navy in 1998 for the second largest share of training funds. The Air Force's share was projected to grow because its training budgets were projected to increase while the Navy's budgets were projected to continue to decline. According to Air Force training officials, the projected growth in the Air Force budget was

due primarily to increases in pilot accessions that resulted in increases in aviation and flight and command managed training. The Marine Corps' share of training funds has been and was projected to be less than 10 percent.

DOD and the services have programs and initiatives to improve the quality of training and bring about greater efficiency in training programs. These efforts are designed to consolidate intra- and inter-service courses; improve the effectiveness of instruction through computer-based training and distance learning (i.e. structured training that can take place almost anywhere and anytime without the physical presence of an instructor); and foster cooperation with the private sector to accelerate the applications of new learning technologies. DOD and the services have not projected the total investment required for these initiatives or the total savings that might accrue from them. Both could be substantial. According to the services, these initiatives will require upfront investments, and savings may occur later, some beyond 2003. For example, DOD estimates that service investments in distance learning could reach $2 billion by 2007. The Army estimates that it will achieve over $900 million in savings and cost avoidances by 2010 through its distance learning efforts. Historically, the military services have managed training initiatives, but the Office of the Secretary of Defense is now assuming a greater role. The Office has endorsed the Army's distance learning plan as a model for all of the services. It has also led the Advanced Distributed Learning program from its genesis to identify and promote collaborative opportunities within DOD as well as with the private sector, other federal agencies, and educational institutions.

Funding and Personnel Levels Declined Through 1997 but Were Projected to Remain Stable Thereafter

Funds for central training declined $4.5 billion, or 17.3 percent, between 1992 and 1997. Most of this decline, $3.2 billion, or 12.4 percent, occurred between 1992 and 1993. From 1997 through 2003, funds were projected to average about $21.5 billion. Military personnel levels decreased by 19.4 percent during the 1992-97 period. As with funding, military personnel levels were projected to remain stable through 2003. (See fig. 1.)

Figure 1: Annual DOD Central Training Funding and Personnel Levels for 1992-2003 (constant 1998 dollars in billions)
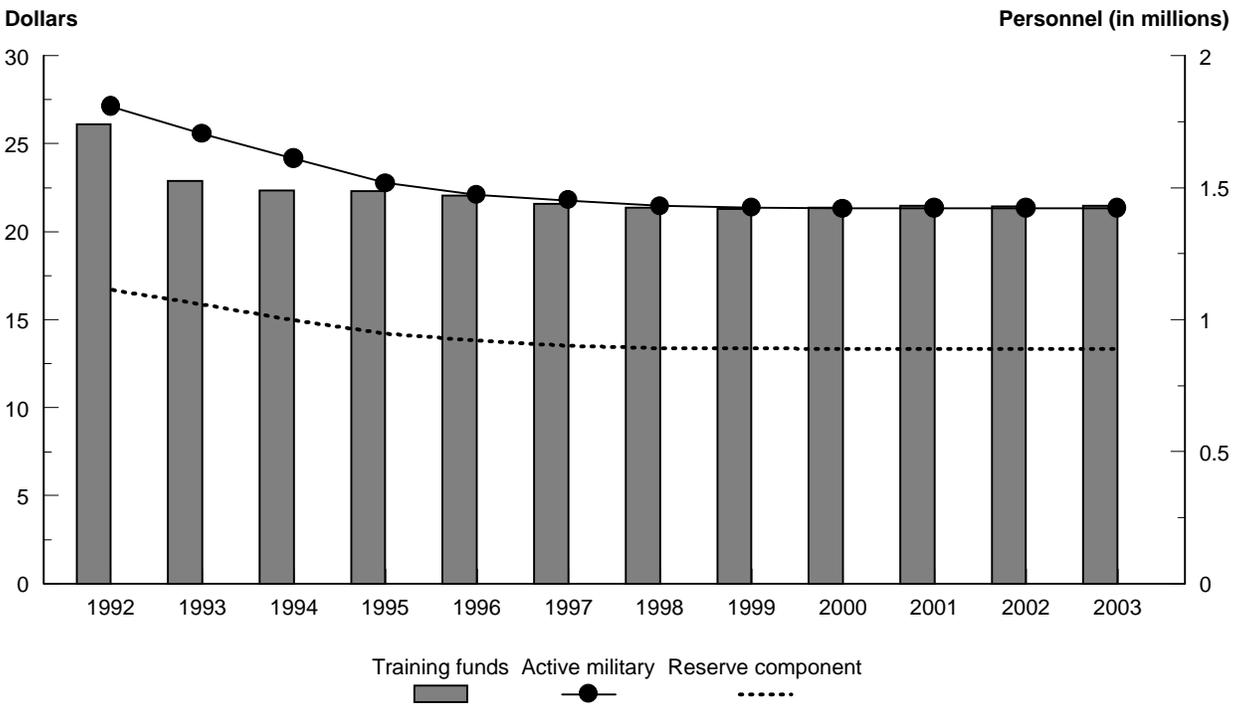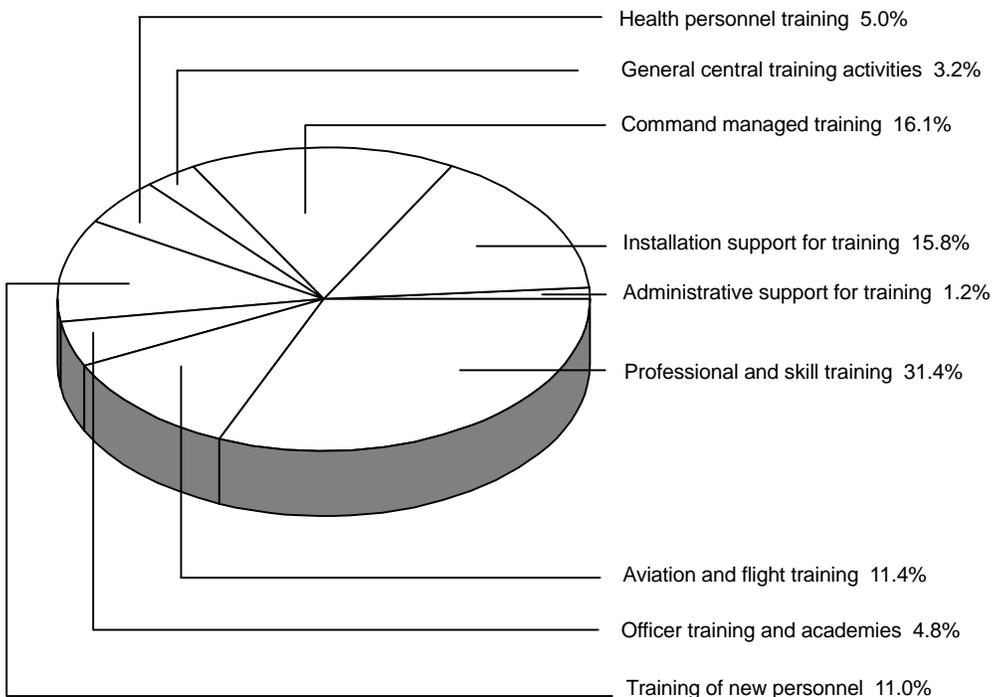

Source: Our analysis of DOD FYDP data.

Three Training Categories Received Majority of Funds

Three training categories—professional and skill training, command managed training, and installation support—received and were projected to receive over 60 percent of DOD's annual central training funds over the 1992-2003 period. This concentration continued despite a projected 19.6-percent decline in funds for these categories over the period. Figure 2 shows the distribution of funds by category for 1998.

　　　　　　　　　　　　　　　　　　GAO/NSIAD-98-168 Defense Infrastructure

Figure 2: Distribution of Central Training Funds by Training Category for 1998

Health personnel training 5.0%

General central training activities 3.2%

Command managed training 16.1%

Installation support for training 15.8%

Administrative support for training 1.2%

Professional and skill training 31.4%

Aviation and flight training 11.4%

Officer training and academies 4.8%

Training of new personnel 11.0%

Source: Our analysis of DOD FYDP data.

The annual funding levels for the three largest training categories are shown in figure 3.

Figure 3: Annual Funding for Three Largest Central Training Categories for 1992-2003 (constant 1998 dollars in billions)

Dollars
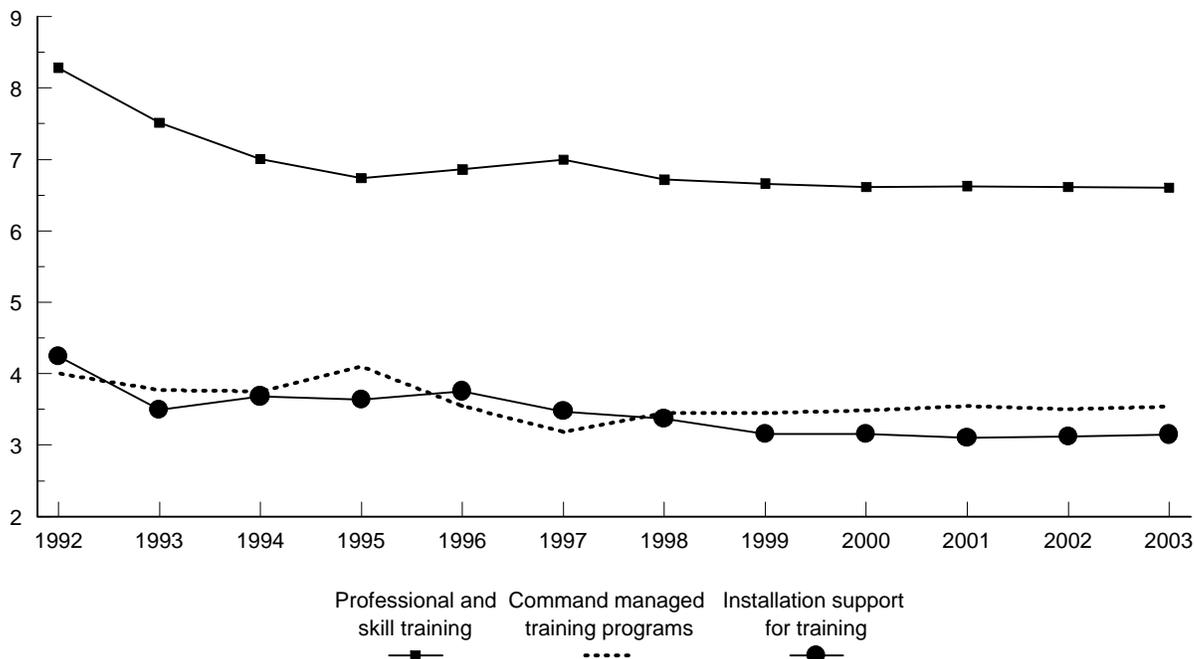
Source: Our analysis of DOD FYDP data.

The professional and skill training category was projected to receive almost one-third, about $7 billion, of central training funds in 1998. Funding for this category was at its highest level in 1992, $8.3 billion, and was projected to decline by over 20 percent to $6.6 billion by 2003. Most of this decline, 18.6 percent, occurred between 1992 and 1995.

Command managed training was projected to receive, on average, about 16.3 percent of central training funds. Other than a 9.1-percent funding increase in 1995, funding for this category fell 20.5 percent from $4 billion to $3.2 billion between 1992 and 1997. Funding was expected to grow to $3.6 billion, or by 11.7 percent, between 1997 and 2001, and stabilize at that level through 2003.

Installation support received 15.8 percent, $3.4 billion, of training funds in 1998. Between 1992 and 2003, annual funding for this category was expected to fall almost 25.8 percent, from $4.2 billion to $3.1 billion, respectively. This was the largest percentage decrease of these three training categories, and according to the services, this decrease resulted from base closures and increased outsourcing of support functions. For example, the Navy closed recruit training centers at Orlando, Florida, and San Diego, California, and the Air Force will contract maintenance at Maxwell Air Force Base, Alabama, by 2000.

The next two largest training categories, aviation and flight training and training of new personnel, accounted for about 23 percent, on average, of central training funds between 1992 and 2003. As figure 4 shows, annual funding for aviation and flight training decreased from $3.2 billion to $2.3 billion, 26.9 percent, during the 1992 and 1996 period and, thereafter, was projected to grow to $2.8 billion, by 18.6 percent, through 2003. The Air Force and the Army accounted for the majority of the growth with planned funding increases of 46.7 and 18.6 percent, respectively, between 1996 and 2003. Funding for the training of new personnel was expected to decline by 12.8 percent over the 1992-2003 period, but annual funding levels fluctuated significantly. For example, funding declined 26.6 percent between 1992 and 1995, but grew almost 30 percent over the 1995-97 period. The decline was due to a reduction in personnel levels, and the increase was due to a growth in accessions to meet end strength goals.

Figure 4: Annual Funding for Two Central Training Categories for 1992-2003 (constant 1998 dollars in billions)

Dollars

Aviation and flight training   Training of new personnel
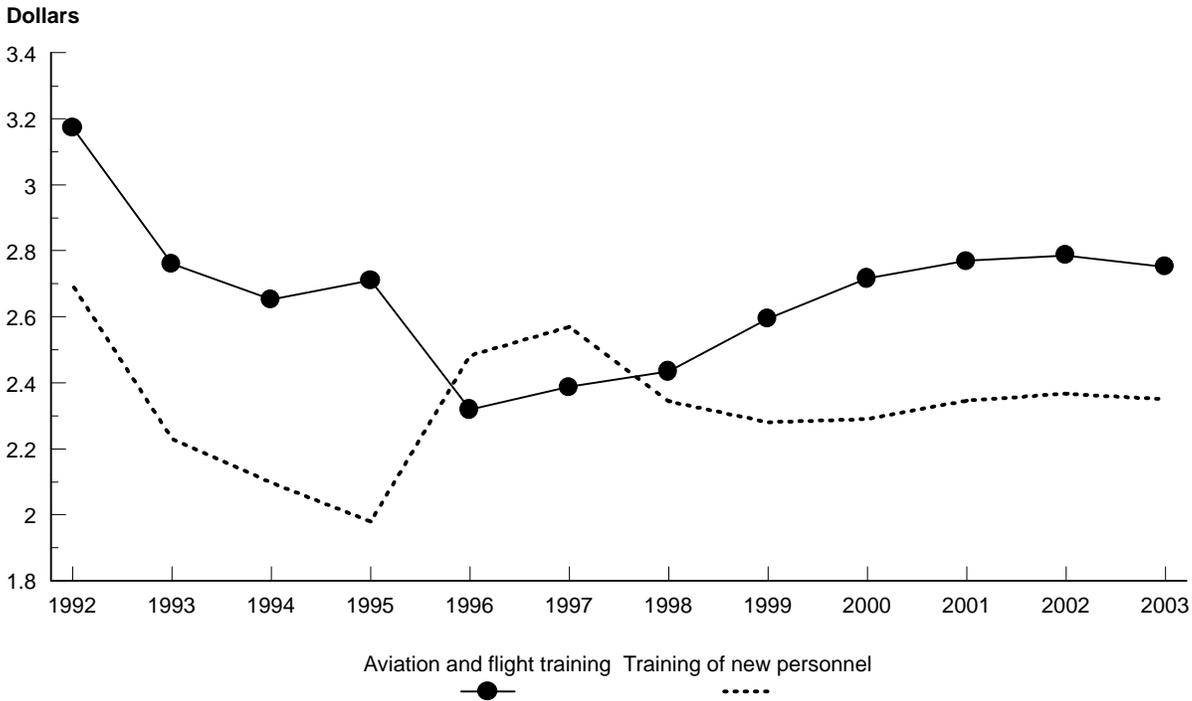
Source: Our analysis of DOD FYDP data.

The four remaining categories—health personnel training, officer training and academies, general central training, and administrative support for training—accounted for less than 15 percent of central training funds in 1998. Figure 5 shows the annual funding levels for these categories.

Figure 5: Annual Funding for Four Central Training Categories for 1992-2003 (constant 1998 dollars in billions)

Dollars
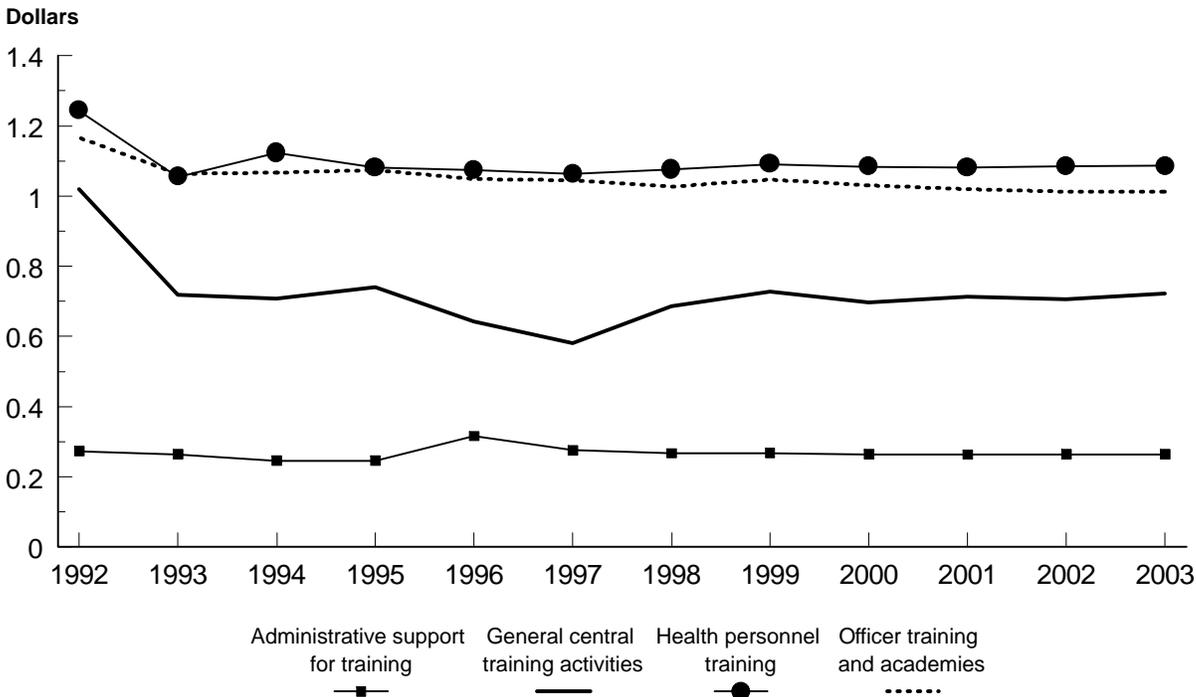
Source: Our analysis of DOD FYDP data.

Army Had Largest Share of Training Funds and Air Force Projected to Overtake Navy for Second Largest Share

The Army had the largest portion of central training funds over the 1992-2003 period—about one-third of the total. Although the Navy received 30 percent of the training funds and the Air Force received 23 percent in 1992, by 1998, the Air Force's portion was projected to increase to 27 percent, and the Navy's portion was projected to decrease to 25 percent. The shift occurred because the Air Force's funding level fell 9 percent while the Navy's fell 30.1 percent between 1992 and 1997. The Air Force was the only service that projected an increase in funding from 1997 to 2003. The Marine Corps' portion was expected to remain less than 10 percent. Besides being the smallest service, most Marine Corps training, other than basic military training, is conducted by other military services. For example, over 60 percent of enlisted skill training and 40 percent of officer skill training are completed at other service schools. Defense-wide

programs accounted for about 6 percent of annual central training funds after 1993. The military personnel costs associated with Defense-wide programs are funded by the services. About 85 percent of that funding was for health personnel training. Figure 6 shows funding by DOD component for selected years.

Figure 6: Central Training Funding by Component for Selected Years (constant 1998 dollars in billions)

Dollars

☐ Army ☐ Navy ▦ Air Force ▦ Marine Corps ■ Defense-wide
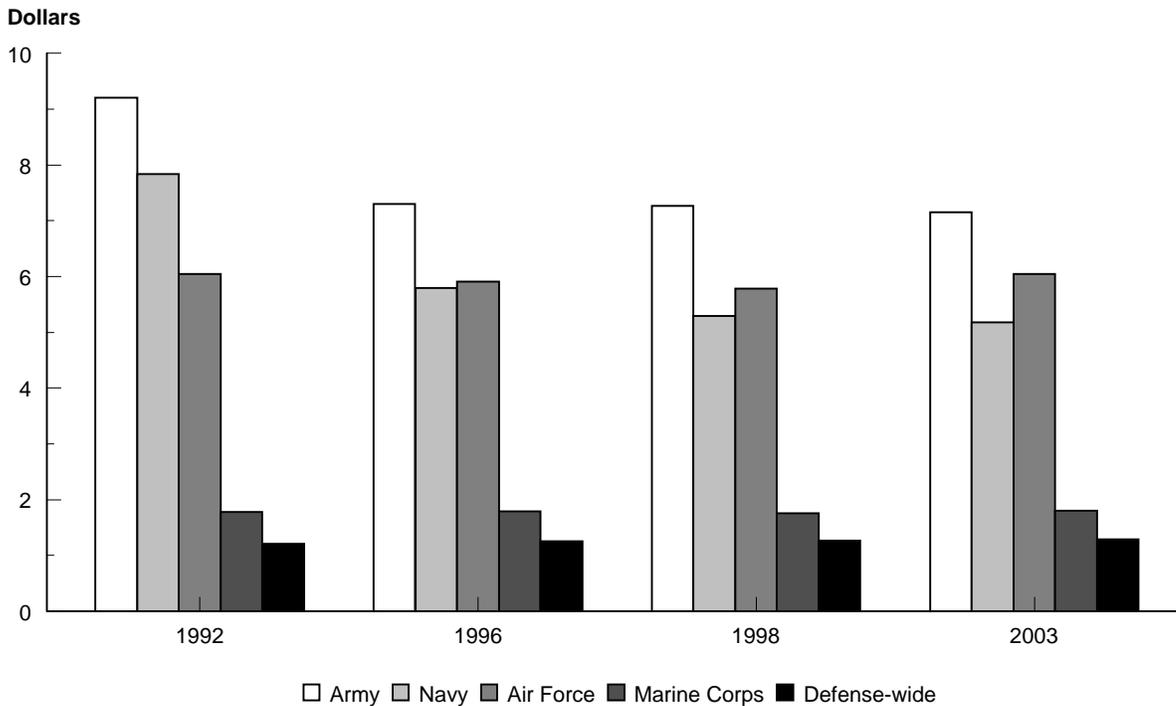
Source: Our analysis of DOD FYDP data.

Army Funding Projected to Remain Stable After Substantial Drop

The Army's central training funds for 2003 were projected to be about 22 percent below 1992 levels. Most of the decline occurred from 1992 through 1994 when funding dropped from $9.2 billion to $7 billion and military personnel levels also fell sharply.[4] Figure 7 shows funding and personnel levels for the 1992-2003 period.

[4]Unless otherwise stated, our reference to military personnel includes active military and reserve component personnel.

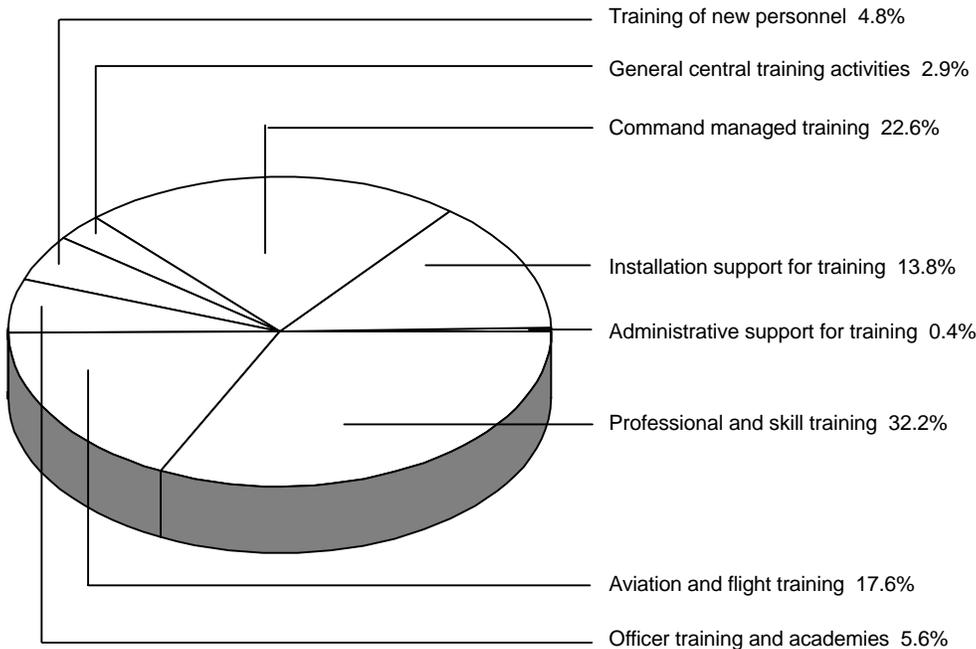GAO/NSIAD-98-168 Defense Infrastructure

Figure 7: Army Training Funds and Personnel Levels for 1992-2003 (constant 1998 dollars in billions)
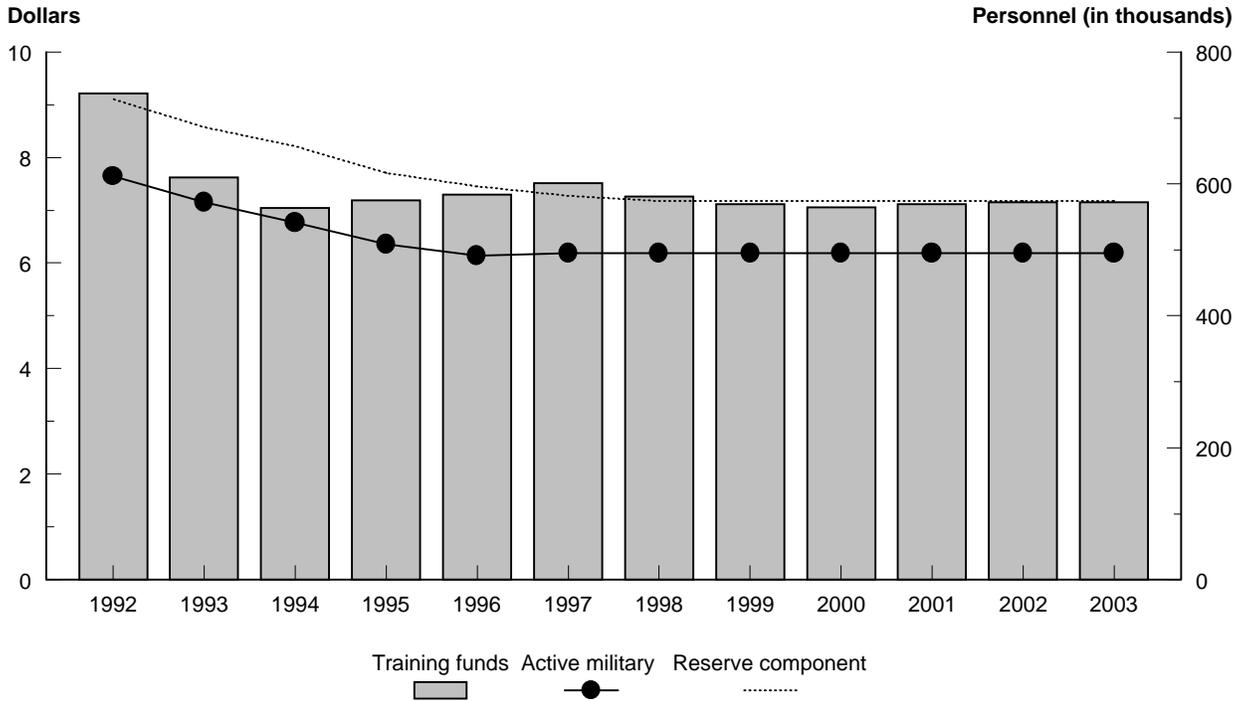
Source: Our analysis of DOD FYDP data.

Three training categories—professional and skill training, installation support, and training of new personnel—consistently commanded the majority of the Army's central training funds and accounted for over 79 percent of those funds in 1998, as shown in figure 8. Appendix III provides a detailed analysis of Army funding trends by training category.

Figure 8: Distribution of Army Central Training Funds by Training Category for 1998

Training of new personnel 19.7%

General central training activities 5.5%

Command managed training 1.8%

Installation support for training 21.8%

Administrative support for training 1.8%

Professional and skill training 37.6%

Aviation and flight training 6.4%

Officer training and academies 5.4%
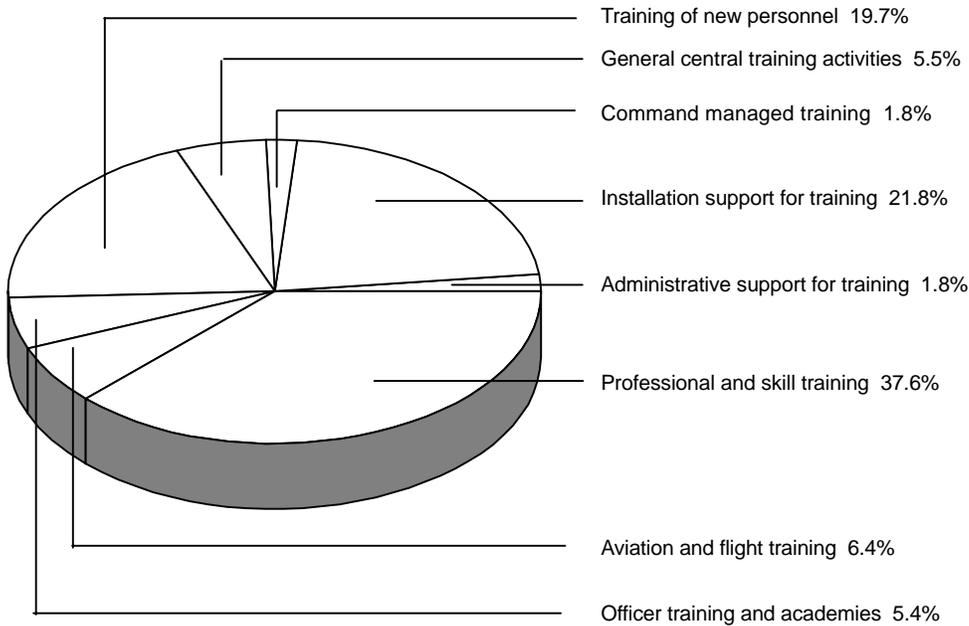
Source: Our analysis of DOD FYDP data.

The largest of the Army's funding decline was in installation support. According to Army training officials, the decline reflected savings from efficiency efforts such as outsourcing/privatizing installation support functions and upgrading installation utilities. After 1995, the Army transferred 80 percent ($600 million) of the funding in command managed training to operating forces, which accounted for the substantial decline in its command managed category. The Army held accession rates below what was required to maintain a level end strength between fiscal year 1992 and 1995, which contributed to the decline in the following categories: training of new personnel, officer training and academies, professional and skill training, and aviation and flight training. Accession rates subsequently increased, which led to a substantial increase in the

funding for the training of new personnel. The Army is implementing new distance learning technology and the Total Army School System, which the service considers essential to improving readiness and reducing training costs.

Navy Projected Substantial Decline in Training Funds

Funding for the Navy's central training was projected to decline by about $2.7 billion (34 percent) over the 1992-2003 period. Most of this decline, which was the largest of any service, occurred from 1992 to 1997 when funding slipped by over 30 percent. As figure 9 shows, the decline in funds followed the decline in personnel.
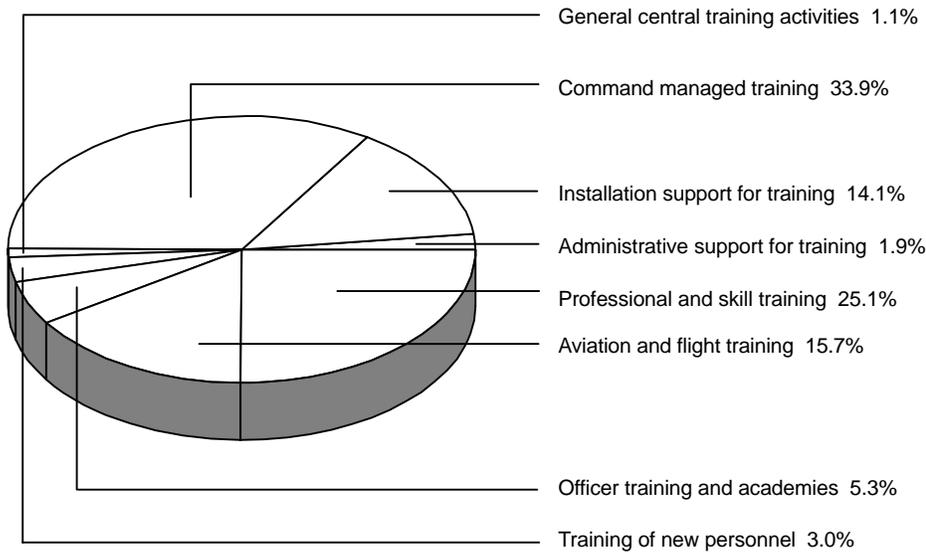
Figure 9: Navy Training Funds and Personnel Levels for 1992-2003 (constant 1998 dollars in billions)
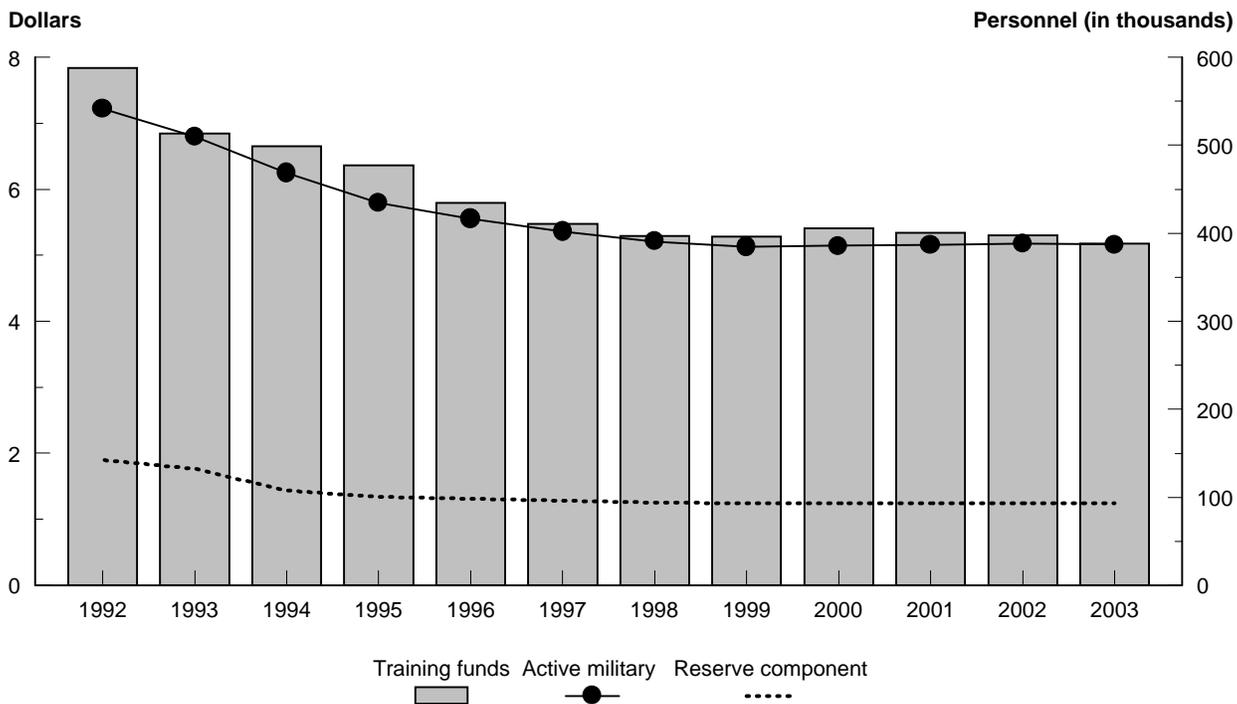
Source: Our analysis of DOD FYDP data.

Three training categories, professional and skill training, command managed training, and aviation and flight training, consistently commanded the majority of the Navy's central training funds. These categories accounted for about 73 percent of the Navy's central training funds in 1998, as shown in figure 10. Appendix IV provides a detailed analysis of Navy funding trends by training category.

Figure 10: Distribution of Navy Central Training Funds by Training Category for 1998

Training of new personnel 4.8%

General central training activities 2.9%

Command managed training 22.6%

Installation support for training 13.8%

Administrative support for training 0.4%

Professional and skill training 32.2%

Aviation and flight training 17.6%

Officer training and academies 5.6%

Source: Our analysis of DOD FYDP data.

The majority of the Navy's funding decline was in the professional and skill training category, which was funded at about $2.7 billion in 1992 but was expected to fall to about $1.7 billion in 2003, a 39-percent decline. Navy training officials stated that the training establishment has

undergone significant changes in the 1990s as a result of decreases in end strength and force structure. End strength decreased by 29.7 percent. Also, several training commands or training courses have been consolidated or eliminated and new technologies have been incorporated in the Navy's schools to more efficiently use scarce training resources.

Despite the overall continued decline in projected funding for most Navy central training programs throughout the period we reviewed, funding for aviation and flight and command managed training was projected to grow after 1998. Funding for aviation and flight training was projected to increase by 8.7 percent ($82.9 million) between 1996 and 2001 due in part to procurement of new training aircraft and increased training workload. Annual command managed training funding was projected to grow by 7.5 percent ($86.2 million) between 1997 and 2001 as a result of increased costs for aviation depot level repairables and the transfer of new programs into this category from the professional and skill training category.

Air Force Funding Level Projected to Be About the Same in 2003 as in 1992

Although the Air Force's funding for central training has fluctuated over the years, it was projected to be at the same level in 2003 as it was in 1992, about $6 billion. During this period, personnel levels were projected to decline by 18.8 percent. The Air Force was the only service that projected higher funding for training in 2003 than in 1997. Figure 11 shows the funding and military personnel levels.

Figure 11: Air Force Training Funds and Personnel Levels for 1992-2003 (constant 1998 dollars in billions)

Dollars   **Personnel (in thousands)**

Training funds   Active military   Reserve component
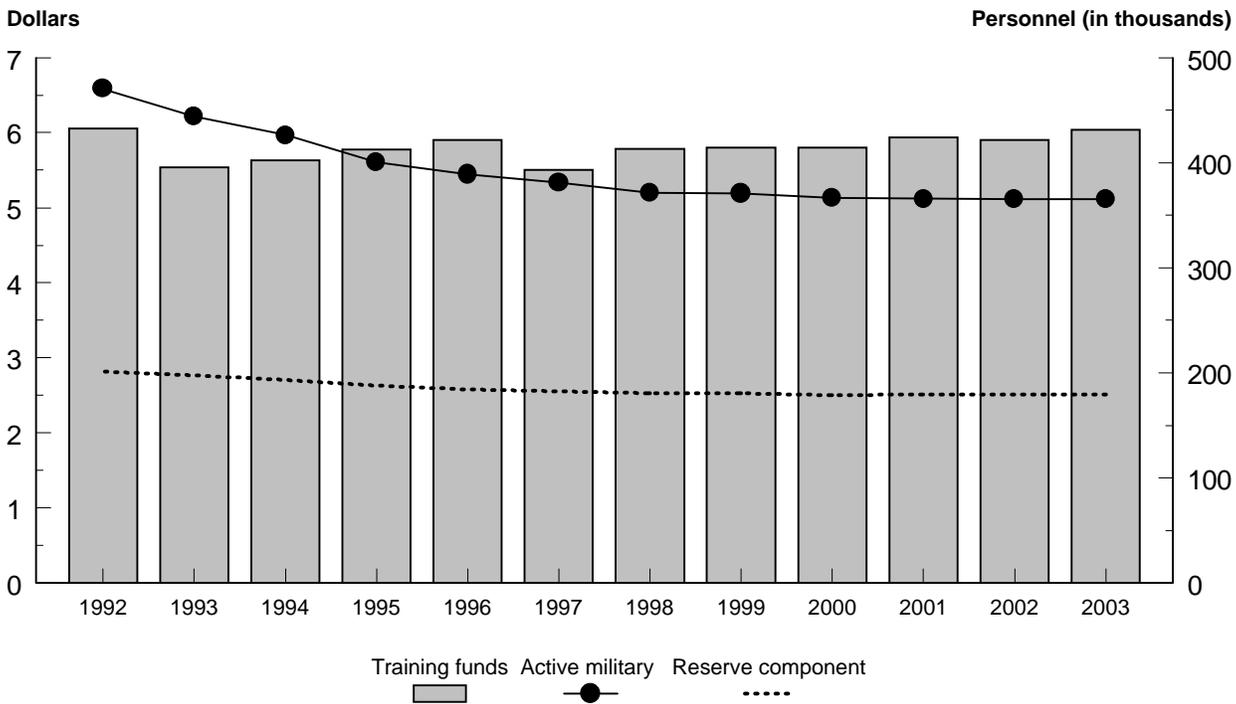
Source: Our analysis of DOD FYDP data.

In 1998, almost 90 percent of the Air Force's central training funds were programmed for four categories: command managed training, professional and skill training, aviation and flight training, and installation support, as shown in figure 12. Appendix V provides a detailed analysis of Air Force funding trends by training category.

called the "Year of Training" initiatives. These initiatives, most of which were implemented beginning in fiscal year 1994, required additional funding for professional and skill training above prior year levels to develop new courses, and cover additional student workloads.

Funding for the training of new personnel and officer training and academies was projected to increase during the 1997-2003 period because the Air Force increased enlisted personnel accessions annually after 1996, and officer accessions after 1994. According to the Air Force, during the force drawdown, the service did not access enough personnel to meet outyear end strength requirements. Also, retention rates decreased, especially for pilots, resulting in significant projected funding increases for aviation and flight (32.9 percent) and command managed (16.6 percent) training.

Marine Corps Funding Projected to Be Only Slightly Higher in 2003 Than in 1992

The Marine Corps' level of annual central training funding was projected to increase 1.1 percent over the 12 years we reviewed. Between 1992 and 1997, the Marine Corps individual training funding grew 2 percent, while its end strength fell 4.9 percent as shown in figure 13. After fiscal year 1997, funding was planned to fall about 1 percent as personnel levels stabilized.

Figure 13: Marine Corps Training Funds and Personnel Levels for 1992-2003 (constant 1998 dollars in billions)
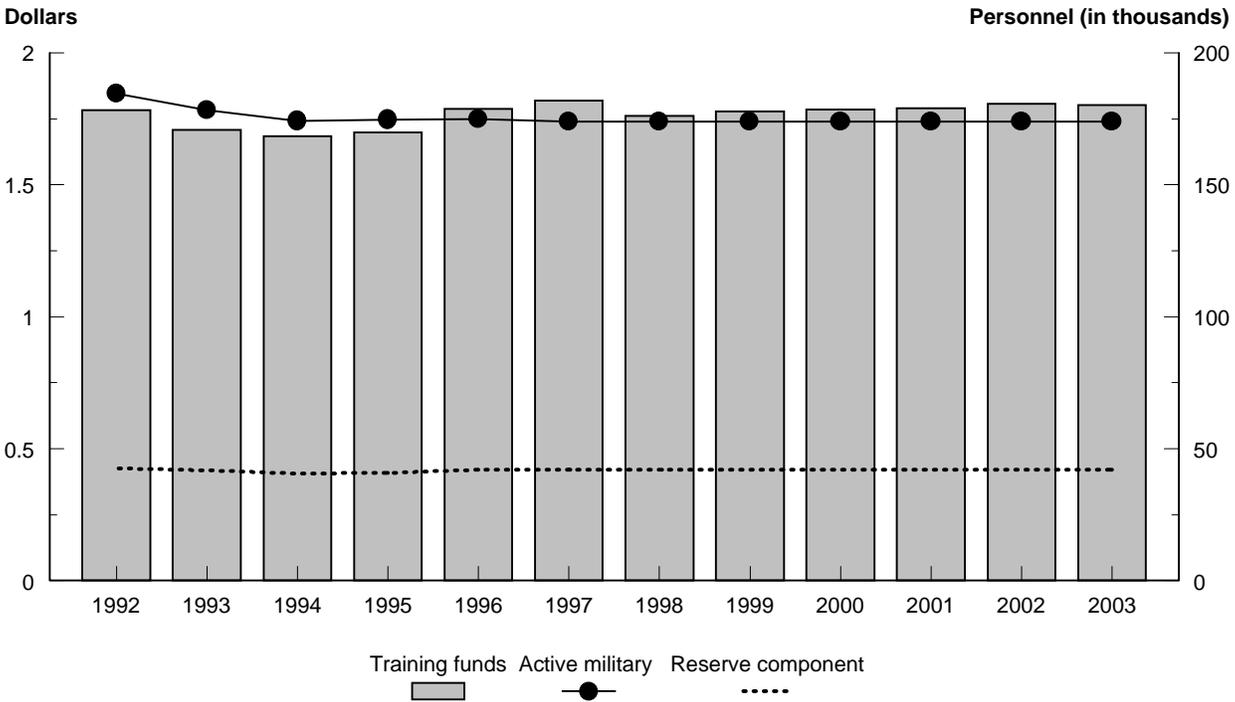
Source: Our analysis of DOD FYDP data.

In fiscal year 1998, over two-thirds of the Marine Corps' central training funding was planned to pay for professional and skill training (39.8 percent) and training of new personnel (27.6 percent), as shown in figure 14. Appendix VI provides a detailed analysis of Marine Corps funding trends by training category.

Figure 14: Distribution of Marine Corps Central Training Funds by Training Category for 1998

Training of new personnel 27.6%

General central training activities 4.2%

Command managed training 8.8%

Installation support for training 13.9%

Administrative support for training 0.1%

Professional and skill training 39.8%

Aviation and flight training 4.0%

Officer training and academies 1.6%
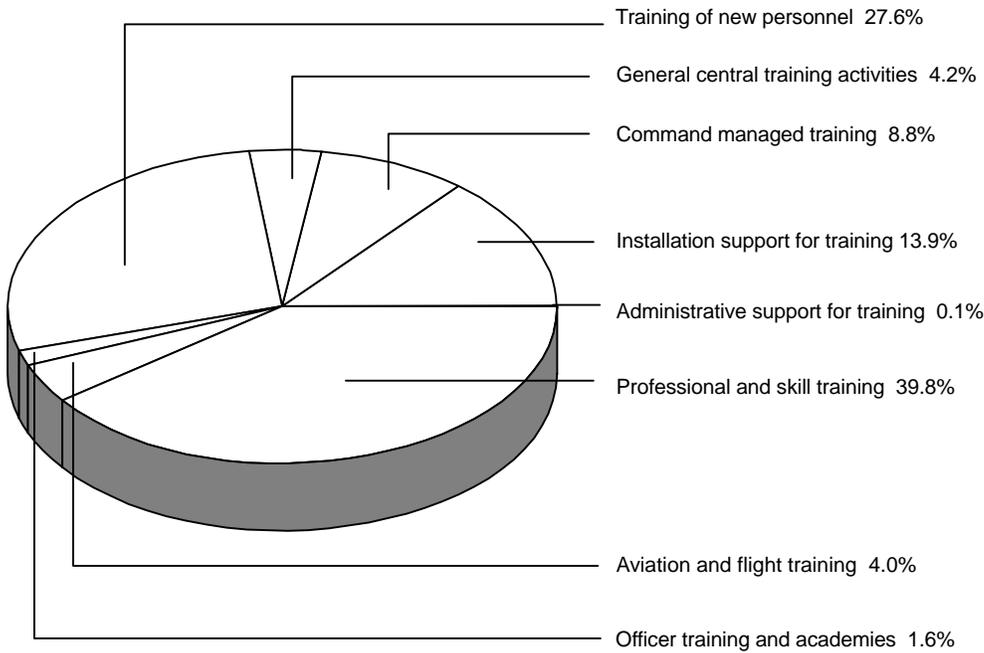
Source: Our analysis of DOD FYDP data.

The slight growth in the Marine Corps' central training funding was due to a planned increase in enlisted turnover rates, resulting in increased annual accession requirements. This increase in accessions was reflected in the 23-percent increase in funding for the training of new personnel over the 1992 to 1997 period. The Marine Corps instituted the Enlisted Career Force Controls program to achieve equitable promotion opportunity and control the flow of Marines into the career force structure. In addition, this program would save personnel costs as the percentage of first-term Marines increased by about 10 percent to 69 percent of the enlisted force. Between 1997 and 2003, the Marine Corps' annual central training funding was projected to fall by less than 1 percent, even though officer accessions were planned to increase, and the recruit training program was lengthened by 1 week.

Initiatives to Reduce Training Costs or Enhance Training Efficiency and/or Effectiveness

The Secretary of Defense's April 1997 <u>Annual Report to the President and the Congress</u> stated that "The key to ensuring a trained, ready force in the future is to develop ways to train the force in more efficient and less costly ways." The Office of the Secretary of Defense (OSD) and the services have used and plan to use techniques, such as (1) course consolidations and more extensive use of technology, in programs and initiatives to bring about intra- and inter-service course consolidations; (2) computer-based training and distance learning to improve the efficiency of instruction; (3) the acquisition of new equipment and technology to support joint training, interservice training, and reduce the total cost of training; and (4) private sector cooperation to accelerate the applications of new learning technologies. See appendix VII for more detail.

Interservice Training Review Organization

The Interservice Training Review Organization (ITRO), an organization of the military services, was established in 1972 to improve the cost-effectiveness and efficiency of service training consistent with individual service requirements. ITRO is a voluntary organization that relies on mutual agreements between the services for consolidation[5] and/or collocation[6] of training courses. In 1992, the Chairman, Joint Chiefs of Staff, directed the service chiefs, through ITRO, to take the lead in a Military Training Structure Review to determine if they could eliminate duplication in military training and create cost savings. The Review resulted in the consolidation/collocation of 128 courses from which DOD estimated annual recurring savings of $8.2 million after a one-time upfront cost of $9.4 million as courses were converted.[7] ITRO is currently focusing on ways to improve the efficiency/effectiveness of training through more extensive use of technology and continuing efforts to consolidate courses.

Distance Learning

Distance learning initiatives are used to move training and education from residential training base settings to operating unit levels. Although the concept of distance learning is not new (e.g., correspondence courses), the services have recently undertaken efforts to make their training

---

[5]A consolidated school or course has a curriculum developed by two or more services. The school or course faculty includes fair share instructor representation from all participating services and the host service. The curriculum may be common throughout or consist of a common core plus service unique tracks. Training policies, directives, materials, and personnel requirements are determined by mutual agreement between the services involved.

[6]A collocated school or course is used by one or more services on another service's installation in which classroom facilities and equipment may be shared. Training policies, curriculum, and instructor requirements are determined by the service(s) conducting the training.

[7]Cost and savings estimates are in fiscal year 1996 dollars.

programs more cost-effective by incorporating technology into their training programs. As we reported, although the full scope of the services' planned distance learning activities has not been identified, OSD officials estimated in August 1997 that the services would obligate at least $100 million in 1998 and as much as $2 billion over the next 10 years for such activities.[8] The Army is the only service that has formally documented its distance learning plan, which DOD endorsed as a model for developing and implementing distance learning. Although OSD officials have actively promoted collaboration among the services, it has not yet developed a departmentwide strategy to focus service distance learning efforts. As a result, each of the services currently is pursuing its own distance learning strategy.

Service Initiatives

Each of the military services completed reviews of its training structure to improve the efficiency and/or effectiveness of the training of its members. At the time of our review, the services had not estimated the total costs nor the savings from these improvements. The Army is consolidating its training structure for both its active and reserve components into a "Total Army School System." The Navy's Training Baseline Assessment Memorandum is a plan for investing in new technologies to accommodate fiscal constraints while, among other things, increasing training efficiencies. The Air Force implemented its "Year of Training" initiatives plan between fiscal year 1992 and 1996. The plan restructured the Air Force's training establishment to improve the quality of its education and training programs by consolidating training within the service and developing additional formal training courses to teach skills rather than using on-the-job training. The Marine Corps is introducing distance learning into its training establishment to provide more effective training with fewer resources, and it plans to build its distance learning program around currently funded infrastructure upgrades to save money.

Advanced Distributed Learning

The most recent DOD initiative is Advanced Distributed Learning. DOD envisions the initiative to be the next generation of more cost-effective learning technologies. The initiative is intended to accelerate the application of new learning technologies to reduce the total cost of training, enhance performance, and maintain readiness. The concept will exploit network technologies for development, delivery, and management of education and training. Advanced Distributed Learning envisions a

---

[8]Distance Learning: Opportunities Exist for DOD to Capitalize on Services' Efforts (GAO/NSIAD-98-63R, Dec. 18, 1997).

partnership among DOD, other federal agencies, private-sector technology suppliers, the broader education and training community, and industry. The initiative not only encompasses military training and the development of job performance aids, but also elementary, high school, university, and industry education and training. OSD and the White House Office of Science and Technology Policy sponsored a "kick-off" meeting in November 1997 to form working groups to identify functional requirements, to determine market requirements, to develop common technical frameworks, and to identify and prioritize research requirements. According to OSD training officials, guidelines for the fiscal year 1999 development and implementation of Advanced Distributed Learning modules will be published in October 1998.

Conclusions

DOD is searching for infrastructure savings to pay for modernization, but it did not program any savings in central training infrastructure in its fiscal year 1998 FYDP. The services reduced their central training infrastructure between 1992 and 1997, and DOD and the services are currently implementing programs and initiatives to contain or reduce costs further. Overall central training funding was not projected to continue to decline because growth in pilot training requirements for the Air Force, the Navy, and the Army offset decreases in other training categories.

Agency Comments

In written comments on a draft of this report, DOD generally concurred with the report. DOD made some general observations on central training funding trends, which we incorporated in the report where appropriate. DOD's comments are reprinted in their entirety in appendix VIII.

Scope and Methodology

To identify trends in annual funding for central training and personnel levels, we analyzed funding and personnel data from the 1998 FYDP for 1997-2003 and data obtained from prior years FYDPs for 1992-96.[9] We did not test DOD's management controls of the FYDP data. We adjusted the nominal dollars to constant 1998 dollars using 1998 DOD inflation indexes. To identify trends in workload data, we used data contained in each of the services' annual Operation and Maintenance Justification of Estimates budget books submitted to Congress for fiscal years 1994-98. The services do not project workload past the budget years and told us we should use the last budget year's values for the remainder of the period we reviewed.

[9]FYDP is the most comprehensive and continuous source of current and historical defense resource data, and is used by DOD for analytical purposes and for making programming and budgeting decisions.

The training programs analyzed were those that DOD categorized as central training infrastructure and Defense-wide support training mission. Essentially, we accepted DOD's allocation of central training infrastructure programs to the training categories. We assigned defensewide support training mission programs, including health personnel training, that were not already categorized as central training infrastructure to the most appropriate training categories. These Defense-wide support training mission programs accounted for about 7 percent of the total value of central training in 1998.

We do not compare the training categories among the services because the training categories do not contain the same programs and activities within each service. According to OSD and service training officials, these differences would distort the comparisons.

To determine the causes for the annual funding and workload trends and to identify OSD and service efficiency and effectiveness initiatives for central training programs, we interviewed officials in OSD, and the Army, the Navy, the Marine Corps, and the Air Force headquarters training divisions and training commands. We did not validate costs and savings associated with the initiatives. Additionally, we examined numerous DOD documents, including the Military Manpower Training Report, the Military Training Structure Review, DOD and service training directives and instructions, and DOD and service budget documents. We also reviewed reports that pertained to military training that had been issued by us and by other organizations. In addition, we provided each of the services with copies of our data analyses and questions about the trends. We have included their responses throughout the report, as appropriate.

Our work was conducted from May 1997 through April 1998 in accordance with generally accepted government auditing standards.

We are providing copies of this report to appropriate congressional committees; the Secretaries of Defense, the Air Force, the Army, and the Navy; the Commandant of the Marine Corps; and the Director, Office of Management and Budget. We will also provide copies to other interested parties upon request.

If you have any questions concerning this report, please call me on (202) 512-3504. Major contributors to this report are listed in appendix IX.

Sincerely yours,

Richard Davis
Director, National Security
   Analysis

Contents

Abbreviations

ADL	Advanced Distributed Learning
AFROTC	Air Force Reserve Officer Training Corps
DOD	Department of Defense
FYDP	Future Years Defense Programs
ITRO	Interservice Training Review Organization
ROTC	Reserve Officer Training Corps
OSD	Office of the Secretary of Defense

Central Training Categories

Central training consists of programs that furnish funding, equipment, and personnel to provide nonunit, or central training of defense personnel. Central training activities provide for the training of new personnel, multiple types of skill and proficiency training, management of the central training system, and support of central training installations.

Administrative Support: Includes management headquarters and visual information activities that support central training activities.

Installation Support: Includes base operations and support, real property maintenance activities, and base communications for central training infrastructure.

Command Managed Training Programs: Includes nonunit training activities managed by the operational commands. These activities include transition training into new weapon systems, supplemental flying to maintain pilot proficiency, graduate flight training in operational aircraft, and specialized mission flight training.

General Central Training Activities: Includes general support to the training establishment and training developments. These resources provide training aids for troop schools and training schools.

Health Personnel Training: Includes the education and training of health personnel at military and civilian training institutions, health professional scholarship programs, University of the Health Sciences, and other health personnel acquisition programs. Although the Department of Defense (DOD) categorizes these programs as central medical infrastructure, we included them in central training because DOD considers health personnel training a segment of its central training mission.

Training of New Personnel: Includes recruit or accession training and One-Station Unit Training.

Officer Training and Academies: Includes reserve officer training corps, other college commissioning programs, officer training schools, and the service academies.

Aviation and Flight Training: Includes flight screening, undergraduate pilot training, navigator training, North Atlantic Treaty Organization pilot training, and procurement of new training aircraft.

Professional and Skill Training: Includes academic and professional military education programs as well as multiple types of skill training. This category includes DOD's civilian training, education and development, language training, undergraduate space training, acquisition training, general skill training, and other professional education.

Two Appropriation Categories Account for Most Funds

Most funds for central training were in the military personnel and operation and maintenance appropriations, 54.7 and 40.1 percent in 1998, respectively. Military personnel appropriations fund pay and allowances of instructors, support personnel, students, and trainees. The operation and maintenance appropriations fund civilian pay and benefits, trainee support, resident instruction, local preparation of training aids and training literature, procurement of supplies and equipment, and contractual services. The other appropriations that fund central training are military construction; procurement; and research, development, test, and evaluation. These three were projected to fund only about 5.3 percent of the total central training budget in 1998.

Four training categories—health personnel training, training of new personnel, officer training and academies, and professional and skill training—received most of their funds from military personnel appropriations. Four other training categories—administrative support, installation support, command managed training, and general central training—received most of their funds from operation and maintenance appropriations. The remaining training category—aviation and flight training—received over 75 percent of funding from operation and maintenance and military personnel appropriations, and over 20 percent from procurement appropriations. Table II.1 shows this distribution for 1998.

Table II. 1: Central Training Funding by Training and Appropriation Category for 1998 (constant 1998 dollars in millions)

Training categories	Military construction	Military personnel	Operation and maintenance	Procurement	Research, development, test, and evaluation
			Appropriation categories		
Administrative support		$96.1	$170.5		
Installation support	$224.5	624.9	2,522.9	$1.3	
Command managed training		1,277.9	2,050.4	102.9	$20.9
General central training		191.0	484.4	11.1	
Health personnel training		827.0	249.2		
Training of new personnel		2,289.9	52.8	1.8	
Officer training and academies	5.6	614.2	406.3	1.1	
Aviation and flight training	2.5	847.6	993.0	506.5	84.9
Profesional and skill training		4,915.1	1,631.0	168.0	1.4
Total	**$232.6**	**$11,683.7**	**$8,560.5**	**$792.7**	**$107.2**

Source: Our analysis of DOD Future Years Defense Programs (FYDP) data.

Analysis of Army Central Training Categories

In 1998, the Army programmed approximately $7.3 billion for central training programs and activities. Most of these programs and activities are managed by the U.S. Army Training and Doctrine Command and are conducted at Army schools. The following provides a detailed description of the Army's funding trends for the training categories.

Professional and Skill Training and Training of New Personnel

Funding for the professional and skill training category was projected to fluctuate between 1992 and 1999, with declines from 1992-94 and 1997-2001 but increases from 1994-97 (see fig. III.1). From 1999 through 2003, funds are projected to stabilize at about $2.6 billion. Funds follow workload closely except for the 1994-96 period when workload continued to decline and funding increased. During this period, the Army transferred Fort Ord, California, from U.S. Army Forces Command to the Army's Training and Doctrine Command.

Figure III.1: Funding and Workload for the Army's Professional and Skill Training Programs for 1992-2003 (constant 1998 dollars in billions)
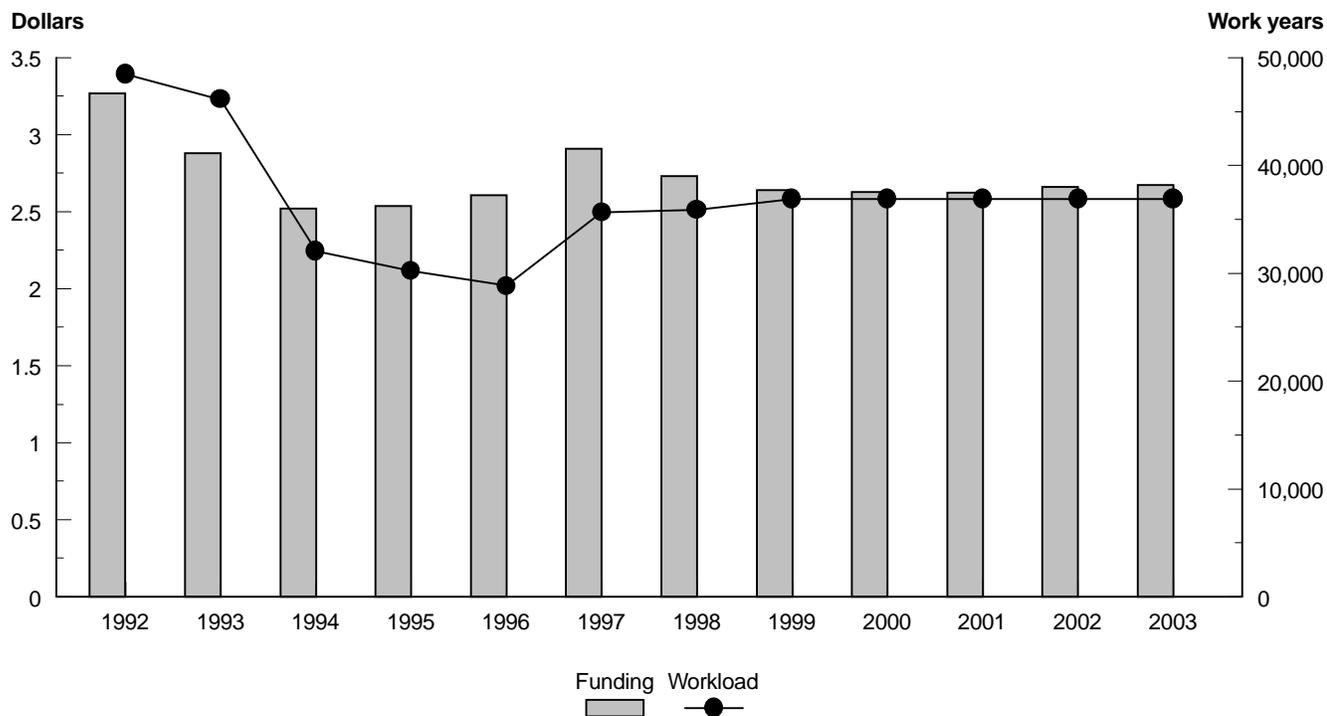
Source: Our analysis of DOD FYDP data.

Funds for the training of new personnel category fluctuated between 1992 and 1999, with declines from 1992-95 and 1997-99 but increases from 1995-97. From 1999 through 2003, funds are projected to stabilize at about $1.4 billion. Funds appear to follow workload closely, as shown in figure III.2.

Figure III.2: Funding and Workload for the Army's Training of New Personnel Programs for 1992-2003 (constant 1998 dollars in billions)

Dollars　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　**Work years**

Funding　Recruit workload　OSUT workload

Source: Our analysis of DOD FYDP data.

Note: Army One-Station Unit Training [OSUT] combines recruit training and initial skill training in certain skills into a single course conducted by a single training unit at a single training installation.

According to Army training officials, the jump in funding for these two categories after 1995 and 1996 was the result of increased accessions to fill a void left from 1992 to 1995 when the Army held accession rates below what was required to maintain a level end strength. The lower accession rate allowed the Army's end strength to decline to 495,000. The Army later increased accession rates to maintain a level end strength, which raised the workload for training of new personnel and professional and skill training.

Installation Support

From 1992 to 2003, installation support funding was projected to decline by about $634.9 million (31.2 percent), as shown in figure III.3. Funding for this category declined $432.8 million (21.3 percent) between 1992 and 1993. For the 1994-2003 period, annual funding was planned to fluctuate slightly between $1.6 and $1.4 billion. Army training officials stated that the reduction was due to savings resulting from efficiency efforts such as outsourcing/privatizing installation support functions and upgrading installation utilities such as central heating plants.

Figure III.3: Funding for the Army's Installation Support for Training for 1992-2003 (constant 1998 dollars in billions)

Dollars

Source: Our analysis of DOD FYDP data.

Aviation and Flight Training

Annual funding for the aviation and flight training category decreased from $620.1 million in 1992 to $461.5 million in 1998, but then increases by about $163 million (35 percent) through 2002, as shown in figure III.4. The projected increase is in the procurement accounts.

Figure III.4: Funding and Workload for the Army's Aviation and Flight Training Programs for 1992-2003 (constant 1998 dollars in millions)
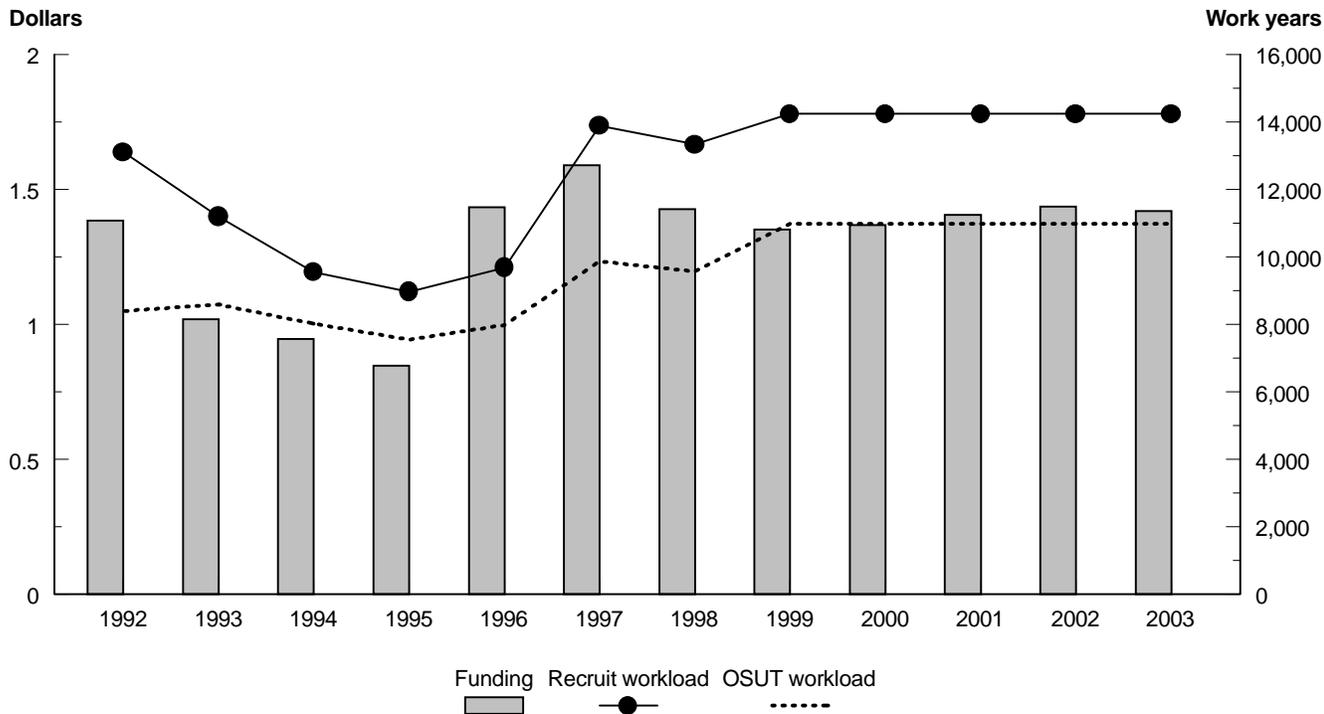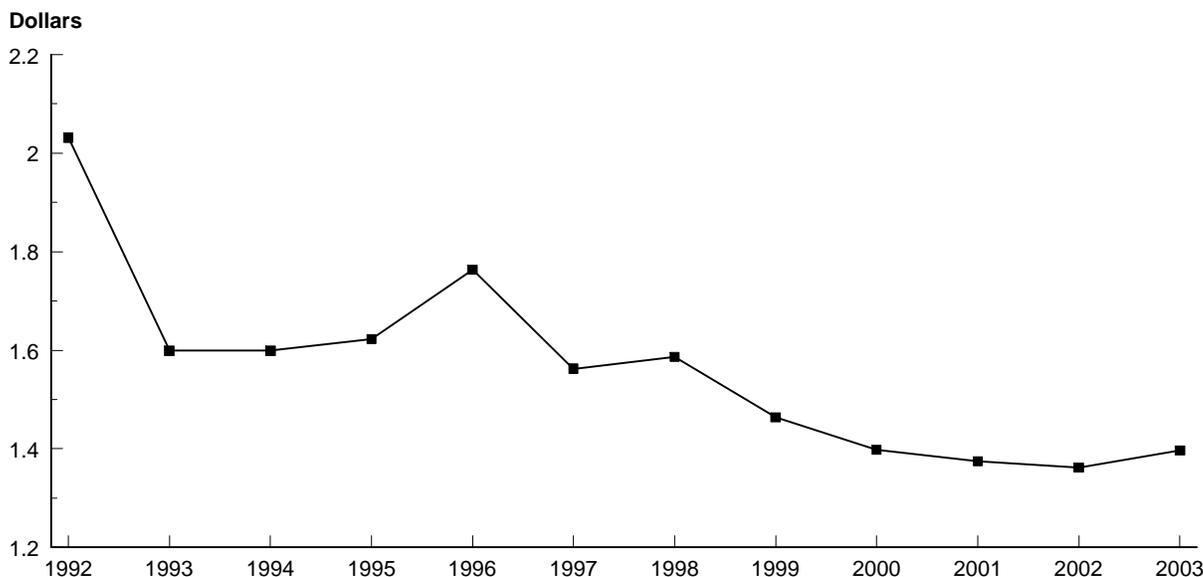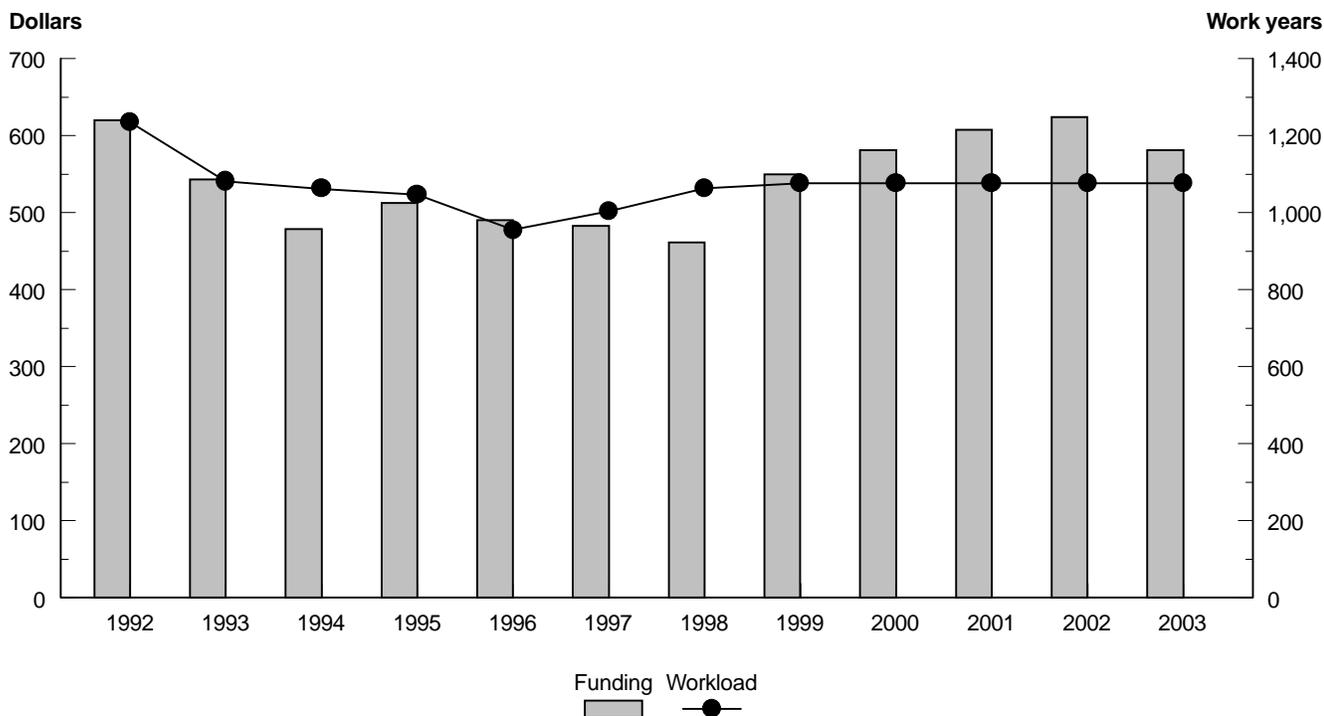

Source: Our analysis of DOD FYDP data.

The Army projected that the 2003 workload for aviation and flight training would be 12.9 percent lower than in 1992. Workload decreased between 1992 and 1996, but subsequently increased through 1999. According to Army training officials, the Army trained fewer pilots than necessary to sustain level end strengths in the 1992-96 period. During those years, the workload for aviation and flight training decreased from 1,235 work years to 955 (a 22.7-percent decline) as shown in figure III.4. After 1996, the workload was projected to increase to 1,076 work years (12.7 percent). To compensate for the low accession rates in the earlier years and to sustain projected end strengths, the Army expects to train more Warrant Officer pilots.

Officer Training and Academies

Funding for the officer training and academies category declined from $447.5 million in 1992 to $381.8 million in 1996, a 14.7-percent decrease. Afterwards, annual funding was projected to remain relatively constant at almost $400 million, as shown in figure III.5, to maintain accessions at a rate that will support the authorized end strength. According to Army training officials, the funding decreases resulted from lower accession rates for officers, and a congressionally mandated reduction in U.S. Military Academy cadet end strength. As shown in figure III.5, workload for officer training and academies was projected to fall by 541 (11.5 percent) work years from 1992 to 1999. Average Reserve Officer Training Corps (ROTC) enrollment declined over the 1992-97 period by 3,618 students (8.6 percent).

Figure III.5: Funding, Workload, and Average Annual ROTC Enrollment for the Army's Officer Training and Academy Programs for 1992-2003 (constant 1998 dollars in millions)
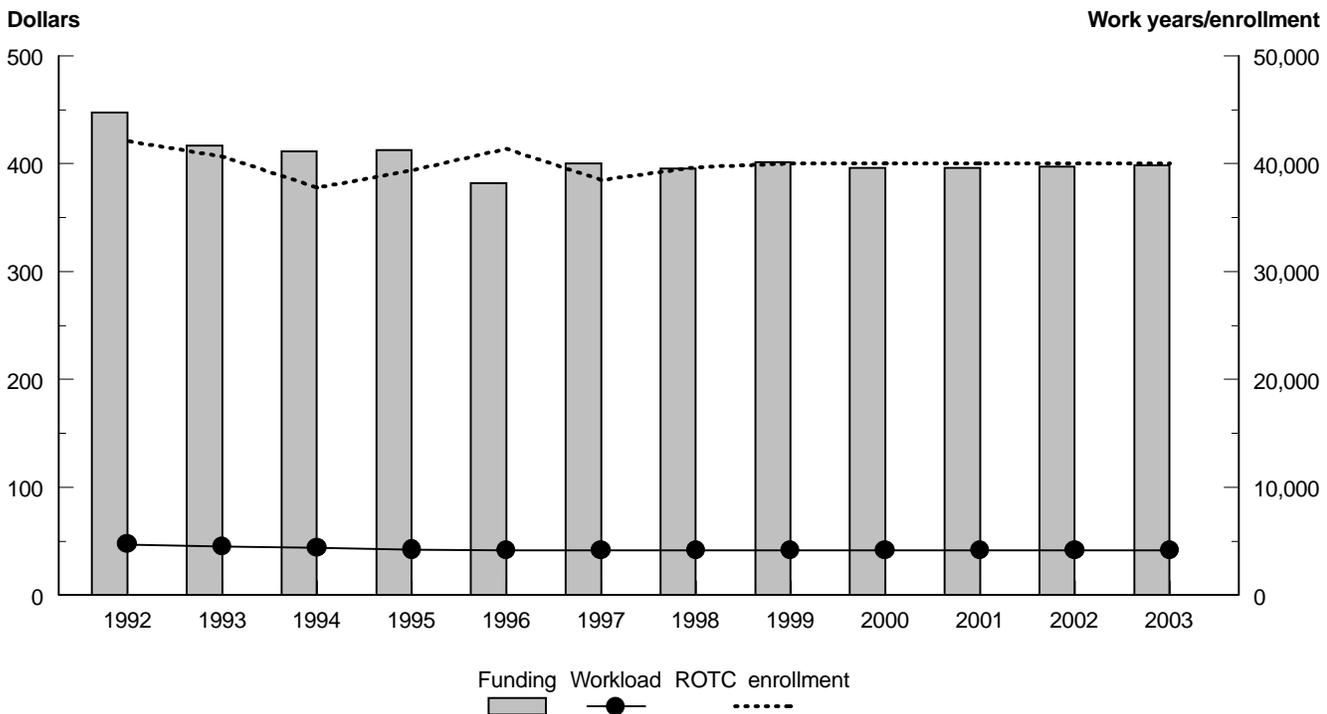
Source: Our analysis of DOD FYDP data.

General Central Training, Command Managed Training, and Administrative Support

General central training activities, command managed training, and administrative support for training activities consume the remainder of the Army's central training funds (an annual average of 11.5 percent). As shown in figure III.6, funding for the general central training category declined from $650.3 million in 1992 to $303.2 million in 1997, a decrease of 53.4 percent. Subsequently, through 1999, funding was projected to increase by about $134 million (44 percent) to $437.5 million, before stabilizing at $431.3 million in 2003. According to Army training officials, the increase in funds will be used to support the training development of courseware that supports the Army Distance Learning Plan and to implement the Total Army School System. The Army considers these programs essential to improving the readiness of the Army personnel while reducing training costs.

Figure III.6: Funding for Three Army Central Training Categories for 1992-2003 (constant 1998 dollars in millions)

Dollars
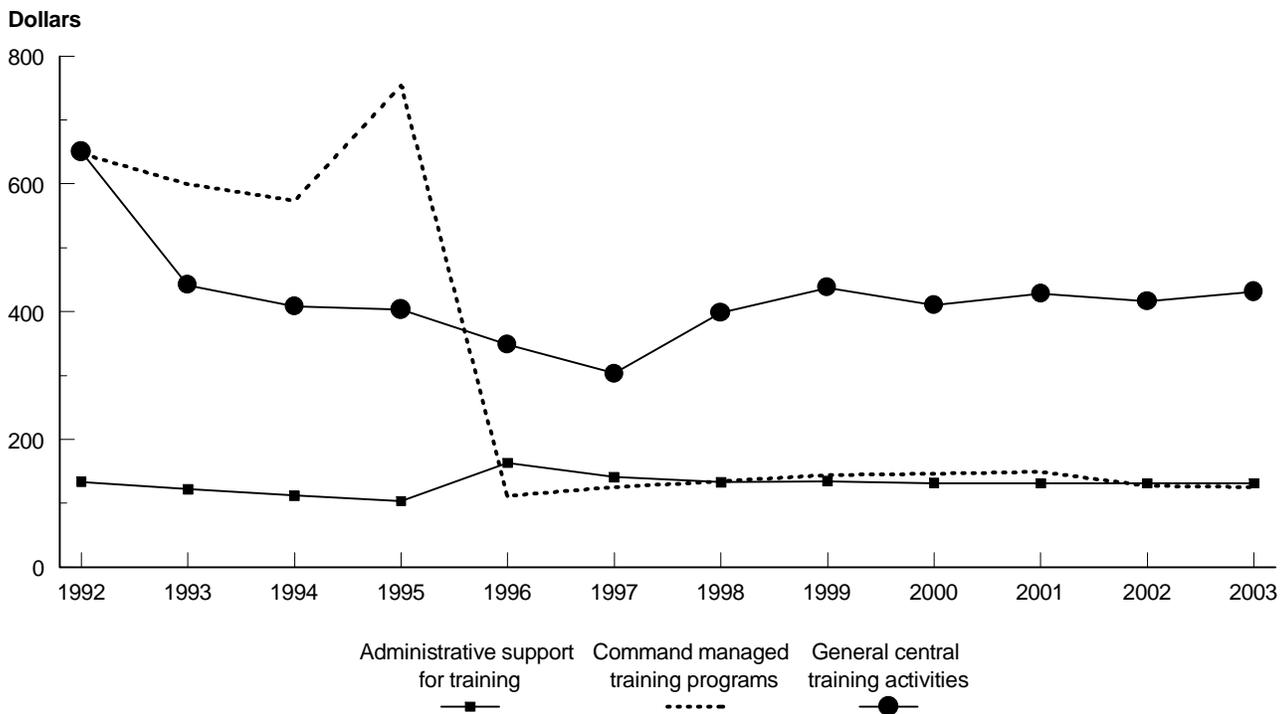
Source: Our analysis of DOD FYDP data.

From 1992 through 1995, the Army funded command managed training at levels that ranged from about $574 million to $754 million; afterwards funding was projected to remain below $150 million, as shown in figure III.6. According to Army training officials, the decrease resulted from transferring funds from the central training infrastructure to the direct support forces infrastructure. These funds were used for combat training centers, force training support, and combat development activities.

Annual funding for the administrative support category is also shown in figure III.6. This funding decreased from $133.4 million in 1992 to $131.2 million in 2003, or about 1.6 percent.

Analysis of Navy Central Training Categories

The Navy programmed $5.3 billion of its 1998 budget for central training programs. Most of these programs, except for graduate pilot training activities, are managed by the Chief of Naval Education and Training. The following sections provide a detailed description of the Navy's funding trends for the training categories.

Professional and Skill Training

The majority of the Navy's central training funding decline was in the professional and skill training category, which was funded at about $2.7 billion in 1992 but was expected to fall to about $1.7 in 2003, a decline of about 39 percent, as shown in figure IV.1. According to Navy training officials, this reduction in funding resulted from (1) base realignment and closure actions, which resulted in the closing of major training centers and consolidating courses,[1] (2) reduced accessions and end strengths, and (3) the transfer of some advanced skill training courses from this category to the command managed training category. Over the 1992-2003 period, the Navy's workload for this category declined every year except in 1996 for an overall decrease of 12,157 (35.2 percent) work years, which reflects the decrease in funding, as shown in figure IV.1.

[1]For example, the Navy closed major training centers at Treasure Island, California, Charleston, South Carolina, and Mare Island, California. The Navy also consolidated air warfare training at Pensacola, Florida.

Figure IV.1: Funding and Workload for the Navy's Professional and Skill Training Programs for 1992-2003 (constant 1998 dollars in billions)
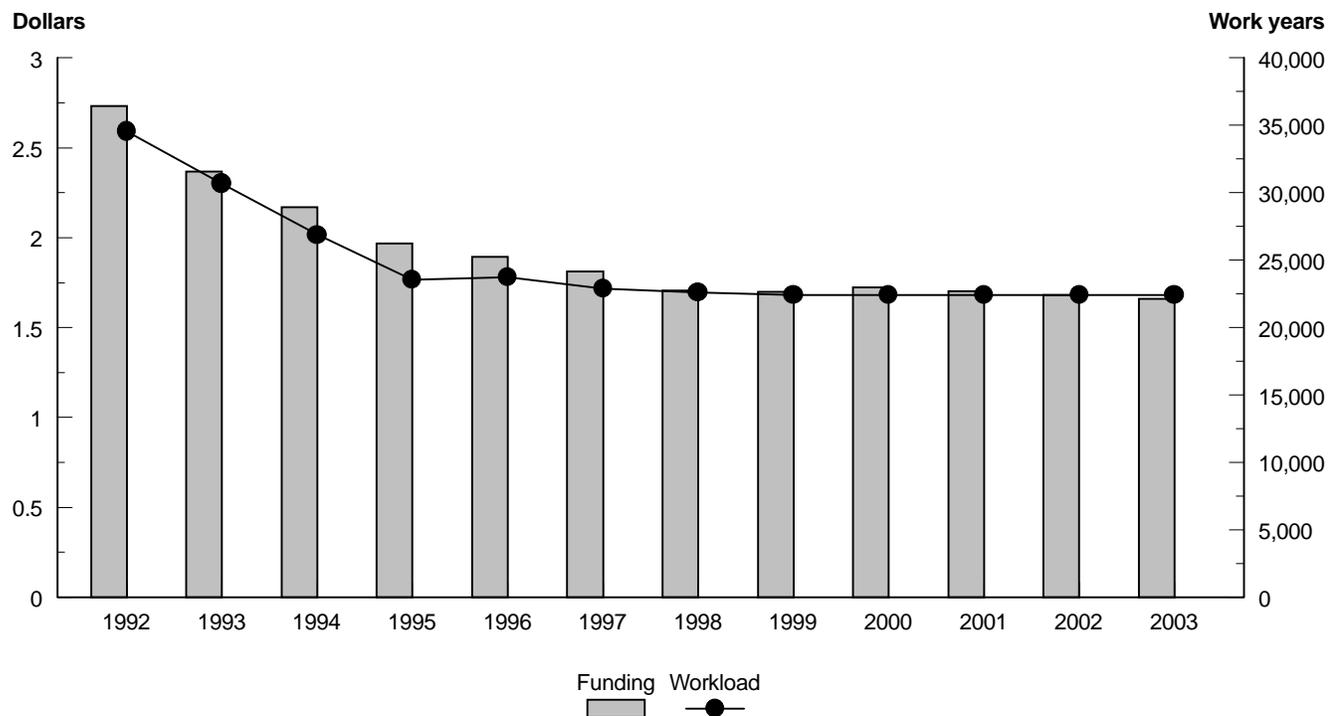
Source: Our analysis of DOD FYDP data.

Command Managed Training

Between 1992 and 1997, funding for command managed training dropped by over $300 million, but was projected to increase by about $80 million by 2003, as shown in figure IV.2. According to Navy training officials, the funding decrease through 1997 resulted from force structure reductions, which led to a decrease in training workload. This decrease allowed the Navy to consolidate some training activities. According to the same officials, the growth in funding after 1997 is related to the transfer of some courses previously funded under the professional and skill training category and the expected increased costs for aviation depot level repairable parts.

Figure IV.2: Funding of the Navy's Command Managed Training Programs for 1992-2003 (constant 1998 dollars in billions)

Dollars

Source: Our analysis of DOD FYDP data.

Aviation and Flight Training

Funding for the aviation and flight training category was projected to decline from 1992 to 2003, except for a slight increase in the 1999-2001 period due primarily to growth in operation and maintenance funding (see fig. IV.3). The funding decline was projected to be 32.2 percent. Navy training officials stated that an increase in the pilot training rate increases operation and maintenance requirements. According to the officials, the pilot training rate had been deliberately set below a level that would maintain a steady state force structure in order to reduce the number of aviators in the training pipeline. However, by 1994, the Navy had determined that the rate was too low and that there were not enough pilots in training to accommodate increased pilot requirements. Also, the Navy increased pilot requirements in 1995 by adding two F/A-18

squadrons, retaining two F-14 squadrons that had been scheduled for retirement, and increasing the number of pilots required for P-3 squadrons. Another factor leading to increased operation and maintenance requirements was the outsourcing or the conversion of Navy air traffic controller positions from military to civilian personnel.

Figure IV.3: Funding and Workload for the Navy's Aviation and Flight Training Programs for 1992-2003 (constant 1998 dollars in billions)
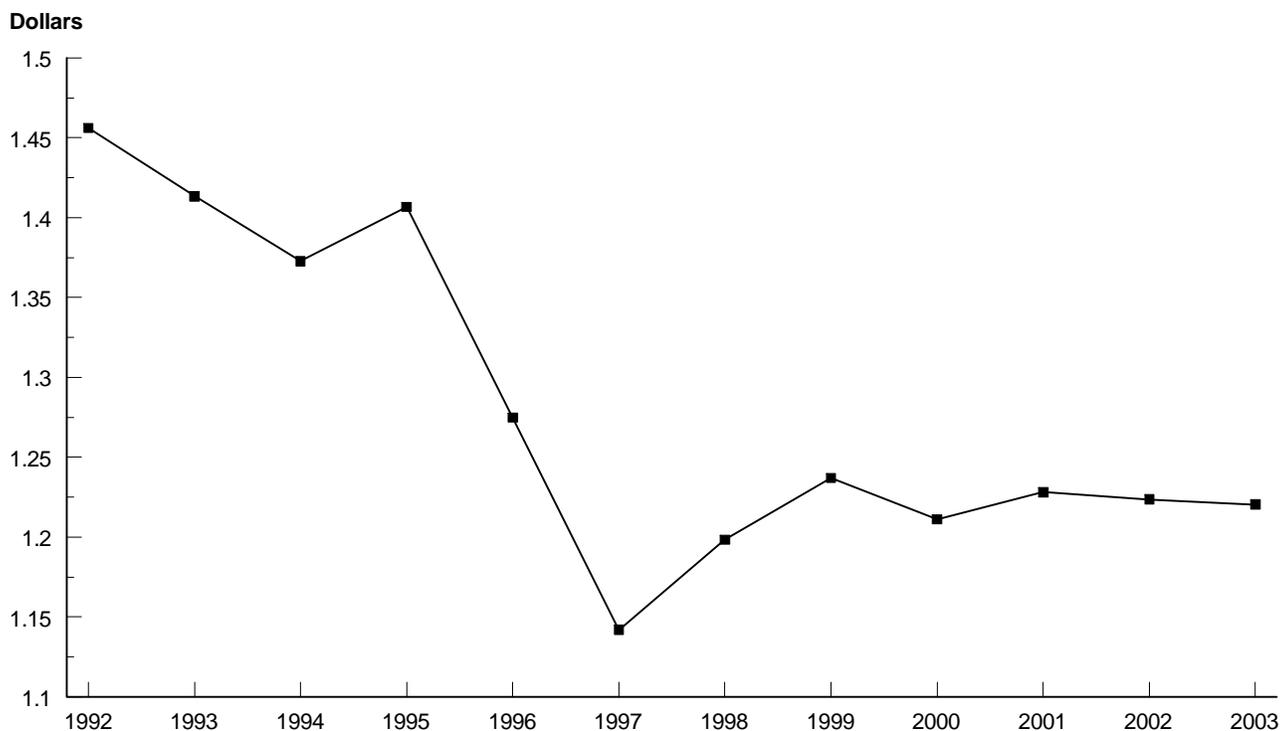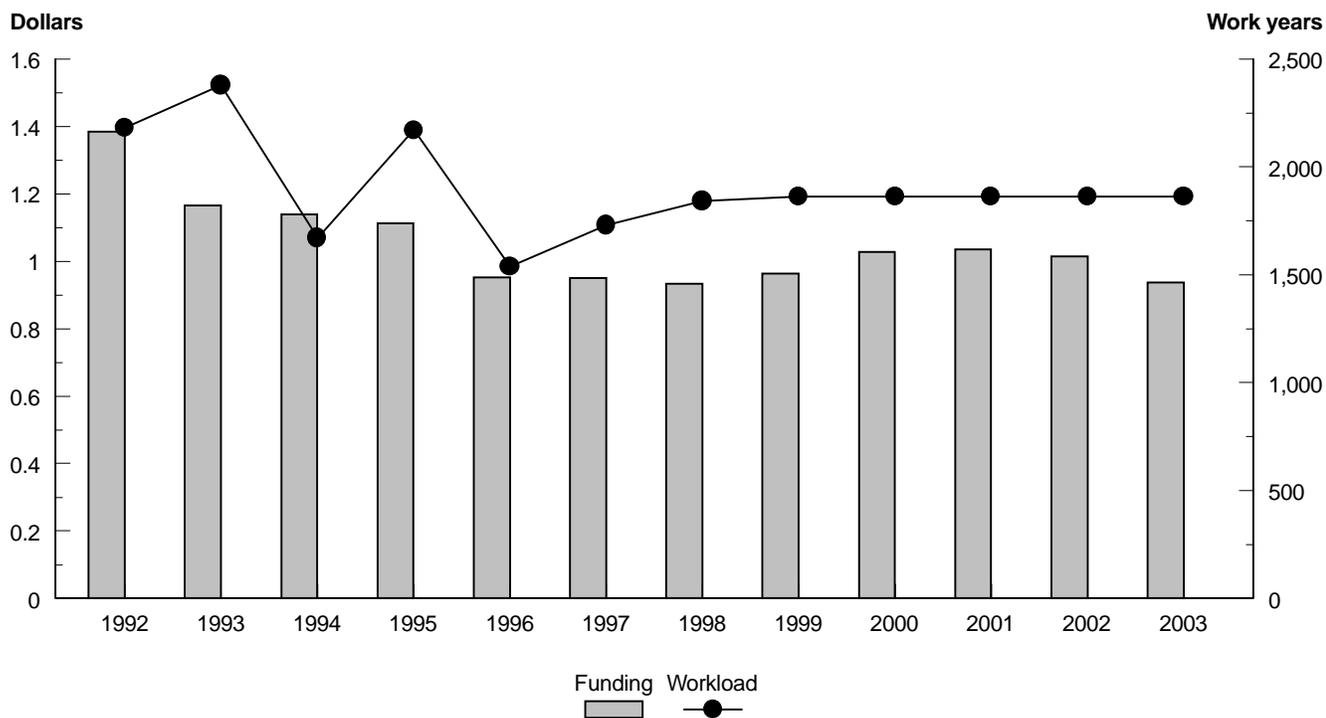

Source: Our analysis of DOD FYDP data.

Training of New Personnel

Funding for the training of new personnel was projected to fall $455 million (65.5 percent) between 1992 and 1999, and then to increase slightly through 2003, as shown in figure IV.4. According to Navy training officials, the service reduced its end strength for recruit accessions by

over 50 percent from 1992 to 2003 and closed two recruit training centers
as a result of base closure and realignment actions,[2] which resulted in the
funding decline. The workload for this category decreased by
585 work years (6.2 percent) from 1992 to 2003. Between 1992 and 1996,
workload decreased by 1,206 work years (12.8 percent), but after 1996, it
increased by 7.5 percent, as shown in figure IV.4.

Figure IV.4: Funding and Workload for Navy's Training of New Personnel Programs for 1992-2003 (constant 1998 dollars in
millions)

Source: Our analysis of DOD FYDP data.

Installation Support

Funding for this category was projected to decline by about $227 million
between 1992 and 2003, as shown in figure IV.5. Military personnel and
operation and maintenance funding for the category declined by

[2]During this period, the Navy closed recruit training commands, Orlando, Florida, and San Diego,
California, and consolidated recruit training at Great Lakes, Illinois.

approximately $174 million and $31 million, respectively. According to Navy training officials, these decreases resulted from base closure and realignment actions discussed earlier, civilianization or contracting out of military billets, and reduced accessions and training requirements.

Figure IV.5: Funding of the Navy's Installation Support for Training for 1992-2003 (constant 1998 dollars in millions)

Dollars
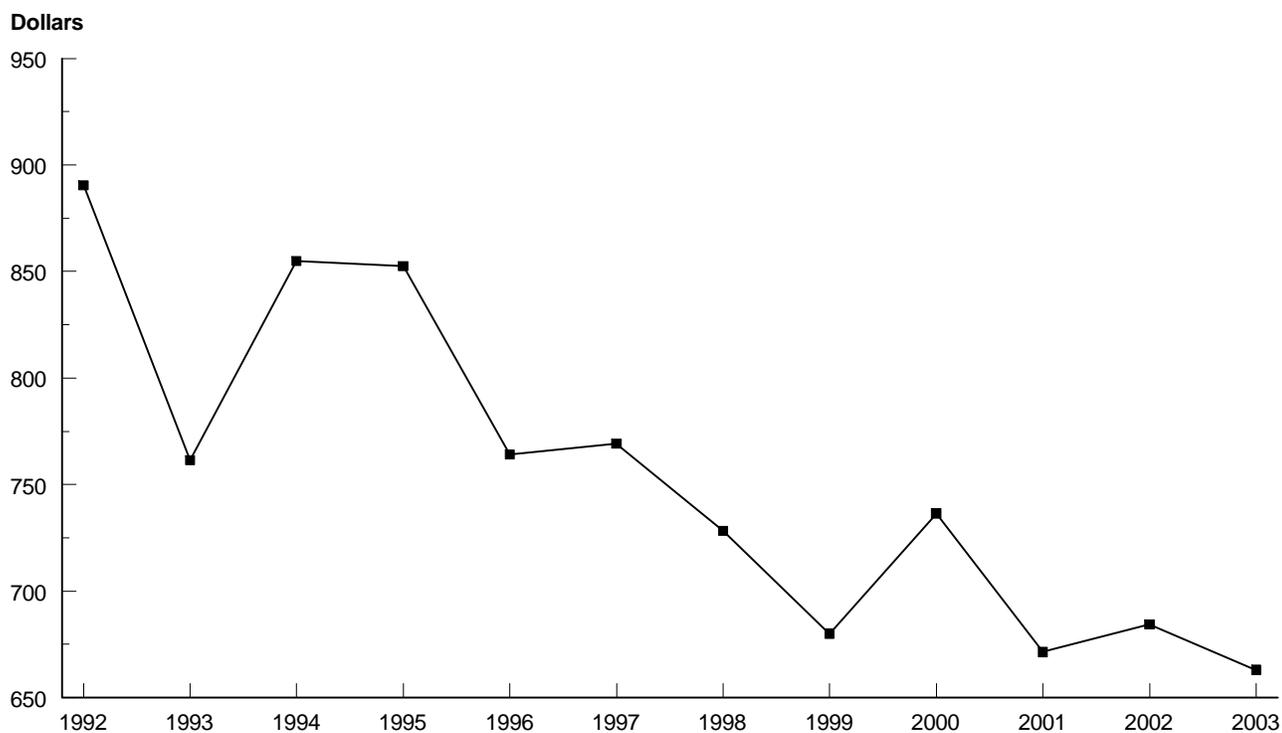
Source: Our analysis of DOD FYDP data.

Officer Training and Academies

As shown in figure IV.6, funding for this category was projected to decline from $371.5 million in 1992 to $277.9 million in 2003, a 25.2-percent reduction. The largest annual decline (10.7 percent) occurred between 1992 and 1993. For the remainder of the period, the decline was expected to be gradual. The overall workload for this category was projected to fall by 1,677 work years (13.6 percent) over the 1992-2003 period, as shown in

figure IV.6. This decline was the result of reducing the number of (1) midshipmen at the U.S. Naval Academy from 4,500 to 4,000 between fiscal year 1990 and 1995, as statutorily required and (2) military staff and military students in other college commissioning programs.

Figure IV.6: Funding and Workload for the Navy's Officer Training and Academy Programs for 1992-2003 (constant 1998 dollars in millions)
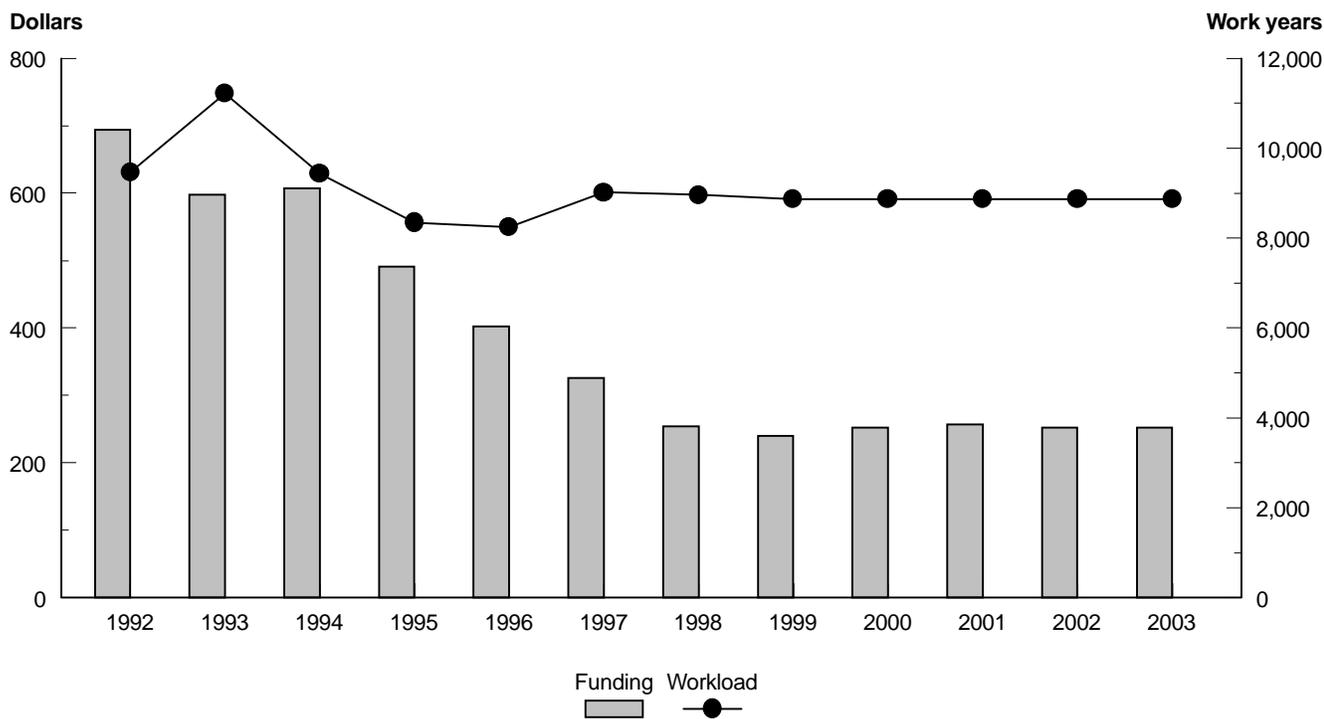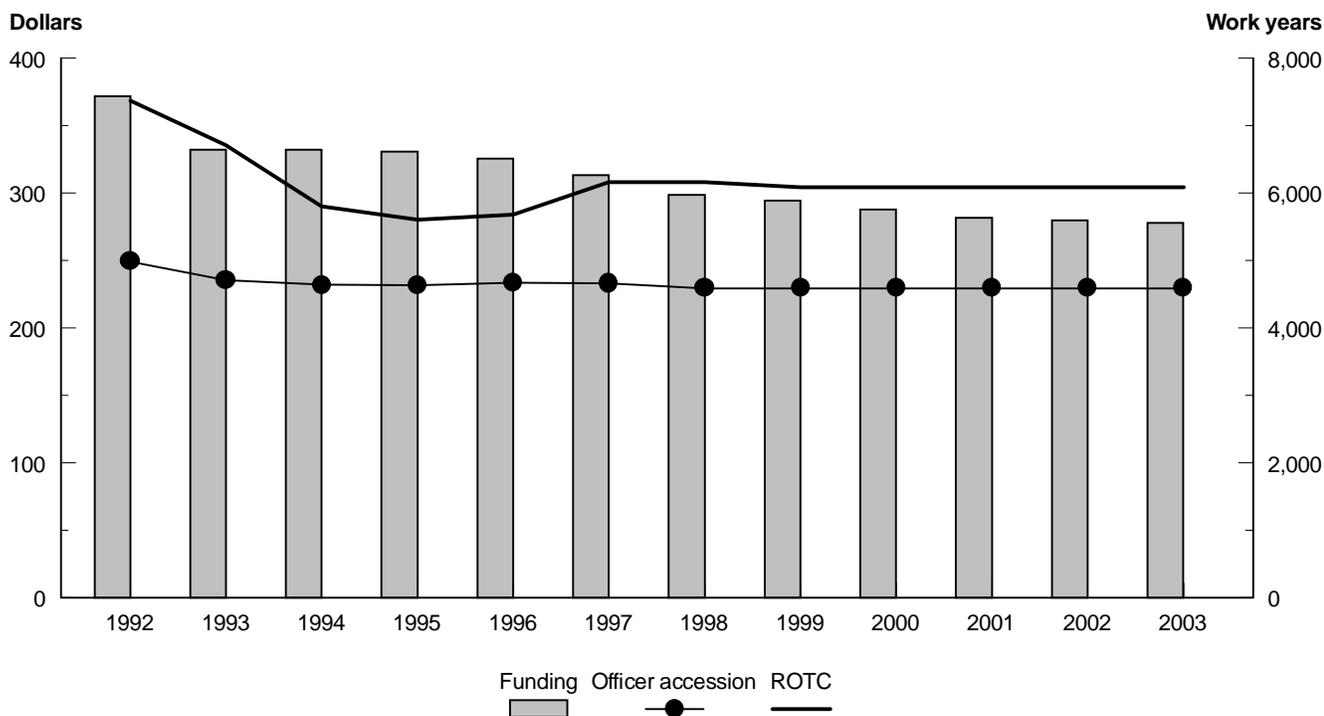

Source: Our analysis of DOD FYDP data.

General Central Training and Administrative Support

The two remaining training categories—general central training and administrative support—receive only 3.2 percent of average annual Navy central training funds. Funding for the general central training category declined from $240.6 million in 1992 to $148 million in 2003. Most of this decline occurred between 1992 and 1993 ($78.9 million of the total $92.6 million falloff). For the remainder of the period we reviewed, the

funding level for this category fluctuated. Administrative support was
planned to receive only $23.3 million in 1998, and has averaged less than
one-half of a percent of annual Navy central training funding.
Administrative support programs declined more than 55 percent over the
12 years we reviewed (see fig. IV.7).

Figure IV.7: Funding for Two Navy Central Training Categories for 1992-2003 (constant 1998 dollars in millions)

Dollars

General central   Administrative
training activities   support for training
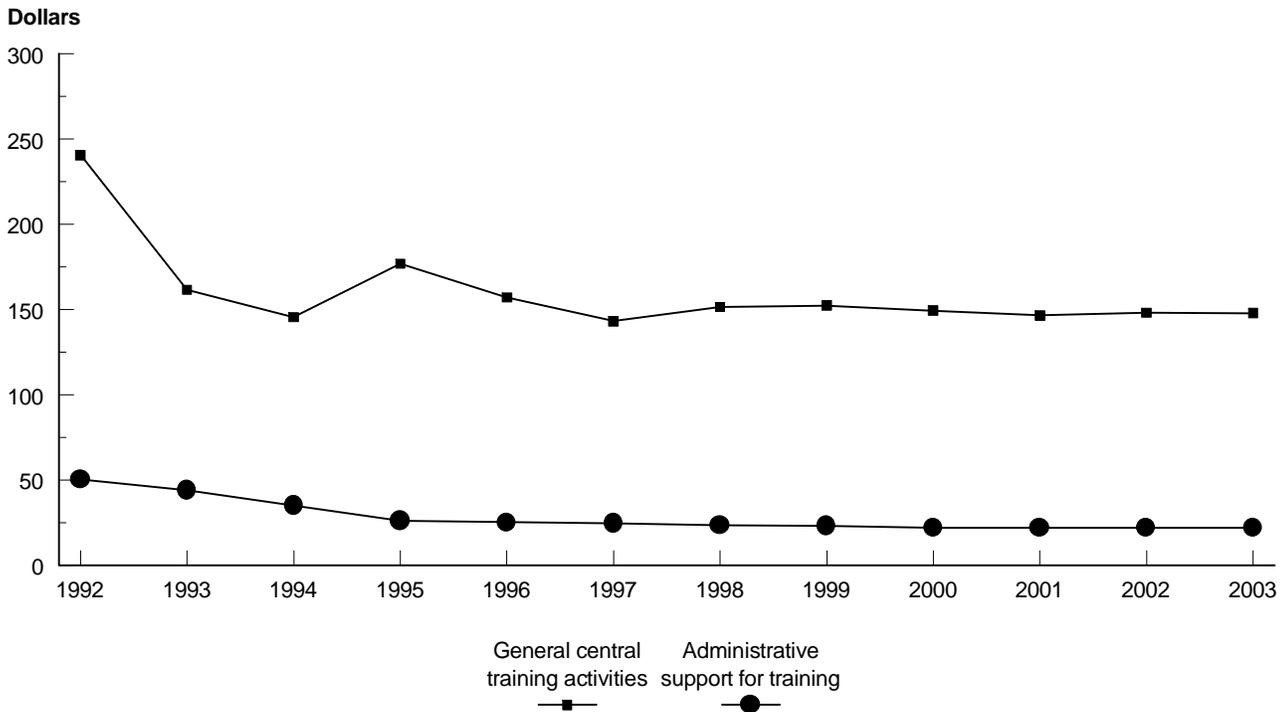
Source: Our analysis of DOD FYDP data.

Analysis of Air Force Central Training Categories

In 1998, the Air Force planned to spend approximately $5.8 billion on individual training programs. Most of these programs, except specific graduate flight training, supplemental flying to maintain pilot proficiency, and specialized mission flight training, are managed by the Air Force's Air Education and Training Command. The following provides a detailed description of the Air Force's funding trends for the training categories.

Command Managed Training

The majority of funds in the command managed training category are for graduate flight training, training used to familiarize new crewmembers with the missions of their operating squadrons, and supplemental flight training. As shown in figure V.1, funding for this category was projected to increase from $1.7 billion to $2 billion (15 percent) between 1992 and 2003, and fluctuate substantially during the 1994 to 1998 period. According to Air Force training officials, pilots trained during the force structure drawdown that were excess to the Air Force's needs were "banked" by placing them in nonflying positions. During the 1994-96 period, these pilots were requalified using funds from this category. Pilot production was reduced, and the drawdown of the banked pilots was accelerated so that the "bank" was depleted by the end of fiscal year 1996. Beginning in fiscal year 1998, graduate pilot training workload was projected to increase as a larger number of pilots complete undergraduate pilot training.

Figure V.1: Funding of the Air Force's Command Managed Training Programs for 1992-2003 (constant 1998 dollars in billions)

Dollars
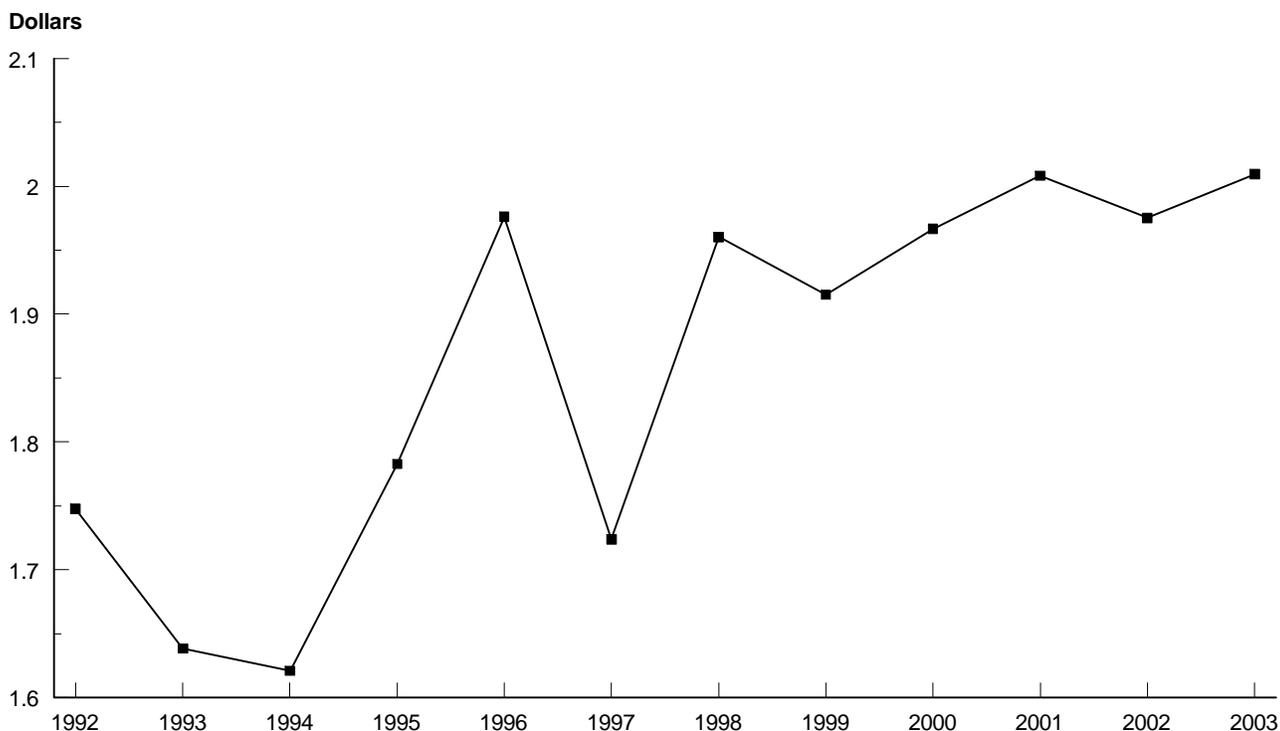
Source: Our analysis of DOD FYDP data.

Professional and Skill Training

Funding for the professional and skill training category was projected to remain relatively stable throughout the period reviewed, as shown in figure V.2. Although there have been some slight shifts in funding from year to year, the Air Force projected funding at $1.4 billion for 2003, the same as the 1992 level. Although the Air Force's end strength has declined, and was projected to continue to decline, the student workloads for this type of training were projected to increase after fiscal year 1996. According to Air Force training officials, since 1989, Guard and Reserve training requirements have increased, and the Air Force has taken the lead in providing training to other servicemembers (3,000 additional students annually) for such programs as navigator training, fire protection, air base ground defense, law enforcement and correction, and air intelligence.

Between 1994 and 1999, the workload for this category was projected to increase 36.6 percent.

Figure V.2: Funding and Workload for the Air Force's Professional and Skill Training Programs for 1992-2003 (constant 1998 dollars in billions)

Dollars   **Work years**

Funding   Workload
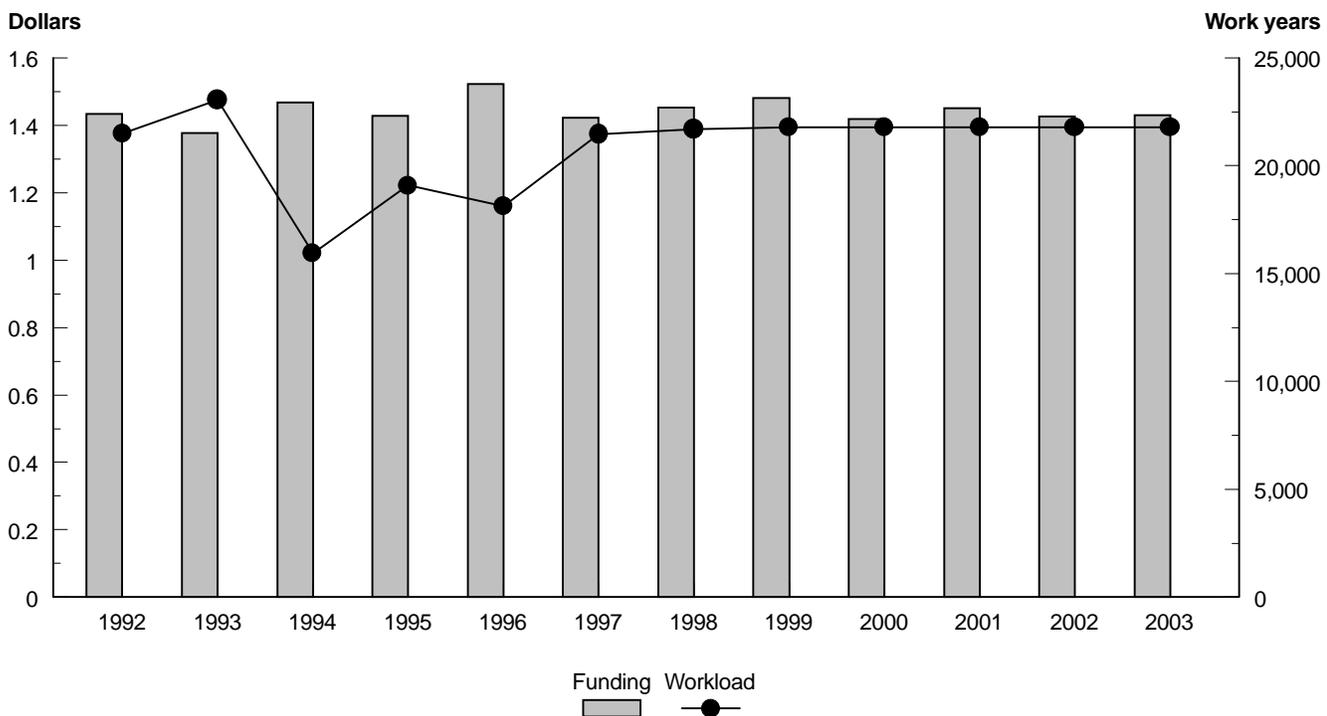
Source: Our analysis of DOD FYDP data.

In fiscal year 1992, the Air Force initiated broad, servicewide improvements in its training establishment, called the "Year of Training" initiatives, which helped maintain the stable annual funding level of professional and skill training between 1992 and 1996 as workload and end strength fell. The objective of the training restructuring effort was to build a coherent education and training architecture to improve the quality of

education and training programs. Two key components of this plan were the establishment of an initial and advanced skills training course for each Air Force specialty. The training restructuring effort required additional funding above prior year levels to pay for the development of new courses, increase course frequency, and additional student workloads. According to the Air Force, centralizing this training has reduced the need for on-the-job training at operational units and produced more graduates capable of functioning at the apprentice level upon arrival at their first duty station.

Aviation and Flight Training

Funding for aviation and flight training was projected to be at about $1.1 billion in 2003, the same level as in 1992, as shown in figure V.3. Funding fell between 1992 and 1996, from $1.1 billion to $747.2 million, or about 31 percent, and then increased thereafter. As mentioned previously, the Air Force had banked pilots in nonflying positions during the force drawdown. Due to the availability of banked pilots, new pilot production reached its lowest level since 1950. Flight training workloads fell 32 percent between fiscal year 1992 and 1995, from 1,945 work years to 1,323 work years. According to the Air Force, during this time period, the Air Force started its new specialized undergraduate pilot training program and introduced a new flight screening aircraft, both of which lowered total flight training costs.

Figure V.3: Funding and Workload for the Air Force's Aviation and Flight Training Programs for 1992-2003 (constant 1998 dollars in billions)

Dollars   **Work years**
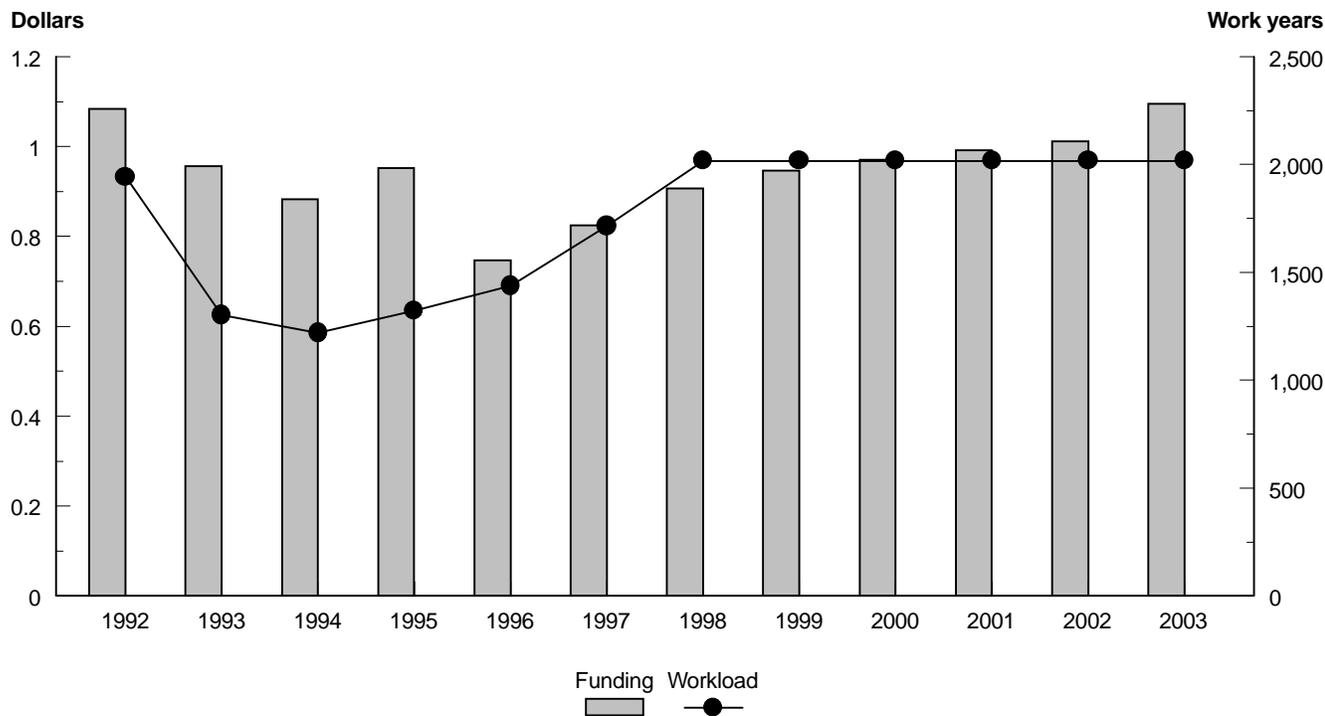
Funding Workload

Source: Our analysis of DOD FYDP data.

Funding for flight training was projected to increase annually between 1996 and 2003, for a total increase of almost 50 percent to $1.1 billion. During this period, workload was projected to increase by 40.2 percent. The closure of the pilot bank in fiscal year 1996, and greater stability in the force structure, required the Air Force to increase undergraduate pilot production to maintain a projected force of 14,000 pilots. Also, due to low retention rates, the Air Force determined that it needed to produce 1,145 pilots annually, but it currently only produces about 650 a year due to training capacity constraints and instructor pilot shortages. The service plans to increase the number of pilots trained annually until it reaches its

annual goal. Also, as part of the Air Force's consolidation of training functions, the Introduction to Fighter Fundamentals program was transferred to the Air Education and Training Command from the Air Combat Command in 1996. The transfer included aircraft, instructors, contract support, other manpower support, and supplies/equipment.

Installation Support

Funding for installation support for training was projected to fall almost annually over the 1992 to 1999 period, from $1.1 billion in 1992 to $769.6 million in 1999, a 27.7-percent decline (see fig. V.4). The Air Force closed/realigned two technical training bases and two flight training bases during fiscal years 1993 and 1994, which substantially reduced base operating costs.[1] In addition, funding for real property maintenance and base operations was deliberately lowered in 1997 to pay for other high priority mission requirements, but no funds were provided in 1998 and 1999. During the 1992-99 period, the Air Force also planned to contract out workload through A-76 contracts at all training bases.

---

[1]The two technical training bases closed were Chanute Air Force Base (AFB), Illinois, and Lowry AFB, Colorado. The training missions supported by these bases were realigned to the remaining four training centers. The two flying training wings closed were at Williams AFB, Arizona, and Mather AFB, California. Pilot production from Williams AFB was spread among the remaining flying training wings, and navigator training was relocated from Mather AFB to Randolph AFB, Texas.

GAO/NSIAD-98-168 Defense Infrastructure

Figure V.4: Funding for the Air Force's Installation Support for Training for 1992-2003 (constant 1998 dollars in millions)

Dollars

Source: Our analysis of DOD FYDP data.

After 1999, installation support funding was projected to increase slightly each year to $849.3 million by 2003. Air Force training officials stated that this increase is due to two factors. First, the majority of the increase is for the migration of base support requirements to Lackland Air Force Base, Texas, an Air Education and Training Command installation, due to the closure of Kelly Air Force Base, Texas. Second, contracting for real property maintenance was funded at less than normal levels from 1997-99 and at "normal" levels thereafter.

Officer Training and Academies

Annual funding for the officer training and academies category, officer accession workload,[2] and average Air Force Reserve Officer Training Corps (AFROTC) enrollment were planned to remain relatively stable as shown in figure V.5. Funding for this category averages 5.3 percent of the Air Force's annual central training funding. Over 90 percent of the funding for this category pays for the U.S. Air Force Academy and the AFROTC. Air Force training officials stated that during the drawdown, to minimize involuntary separations, the Air Force accessed officers at only 85 percent of what was required to sustain projected outyear end strength. In addition, the U.S. Air Force Academy reduced its annual cadet end strength by 10 percent, to about 4,000, as mandated by Congress. To meet officer requirements, the Air Force increased funding annually for more AFROTC scholarships from fiscal year 1994 onward. The increase also paid for higher tuition costs. In fiscal years 1998 and 1999, some of the increased AFROTC scholarship costs were offset by closures/consolidations of some AFROTC detachments.

---

[2]Officer accession workload includes the U.S. Air Force Academy and the Officer Candidate School.

Figure V.5: Funding, Workload, and Average Annual ROTC Enrollment for the Air Force's Officer Training and Academy Programs for 1992-2003 (constant 1998 dollars in millions)

Dollars   **Work years/enrollment**

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003

Funding   Workload   ROTC enrollments
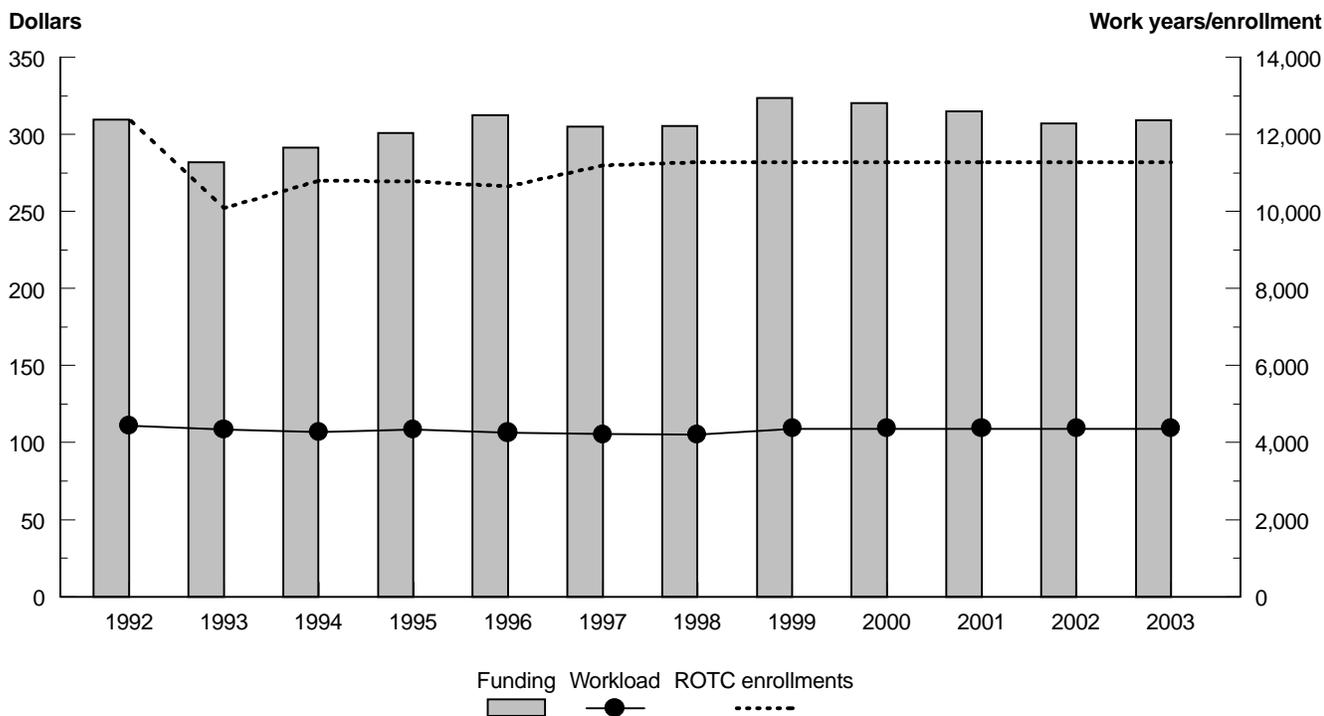
Source: GAO analysis of DOD FYDP data.

During the period reviewed, the proportion of annual officer training and academy funding from military personnel and operation and maintenance appropriations changed substantially, and a greater proportion of funding for this category was projected to come from operation and maintenance appropriations. Military personnel and operation and maintenance appropriations provided about 74 and 22.8 percent, respectively, of funding for this category in 1992, but by 2003, the proportion of funding from these appropriation categories was projected to be 63.4 and 36 percent, respectively. According to the Air Force, much of this change is due to two directives. The Fiscal Year 1993 Defense Authorization Act

directed the U.S. Air Force Academy to increase the ratio of civilians on the faculty. In addition, an Inspector General audit directed the Academy to convert 196 military positions to civilians. The civilian faculty conversion began in fiscal year 1993, and it is planned to continue through fiscal year 2000, increasing annual operation and maintenance funding, while decreasing military personnel appropriations.

Training of New Personnel

Recruit training was projected to receive, on average, about 3.2 percent of annual individual training funds between 1992 and 2003. The annual level of funding for this category was projected to be lower in 2003 than in 1992, as shown in figure V.6. However, recruit training workload was projected to be slightly higher (7.4 percent) in the 1999-2003 period than in 1992.

Figure V.6: Funding and Workload for the Air Force's Training of New Personnel Programs for 1992-2003 (constant 1998 dollars in millions)

Dollars   **Work years**

Funding Workload
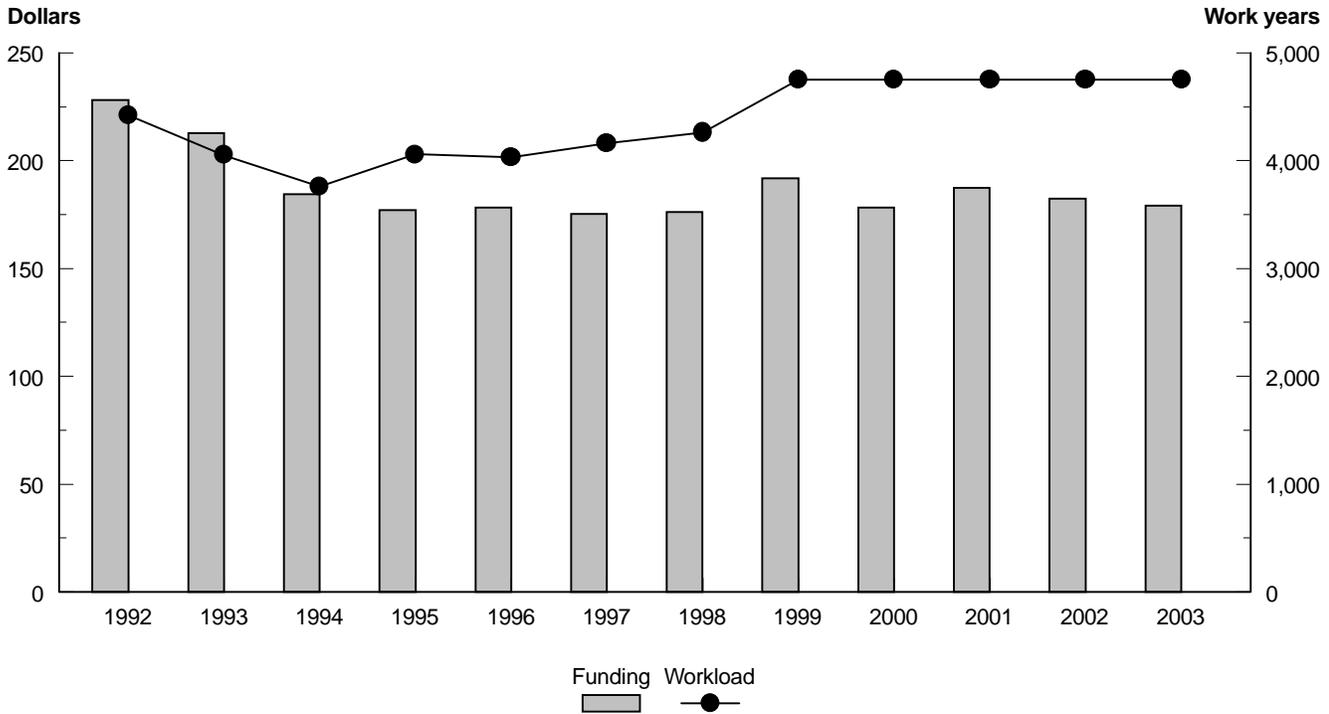
Source: Our analysis of DOD FYDP data.

Administrative Support and General Central Training

These two categories were projected to receive, on average, less than 2 percent each of annual Air Force central training funds. The annual funding levels for these two categories are displayed in figure V.7. Most administrative support funds are for training headquarters and visual information activities for training. The general central training category includes funding for training aids/literature for schools and the development of training technology and instructional systems.

Figure V.7: Funding for Two Air Force Central Training Categories for 1992-2003 (constant 1998 dollars in millions)

Dollars

Administrative   General central
support for training   training activities
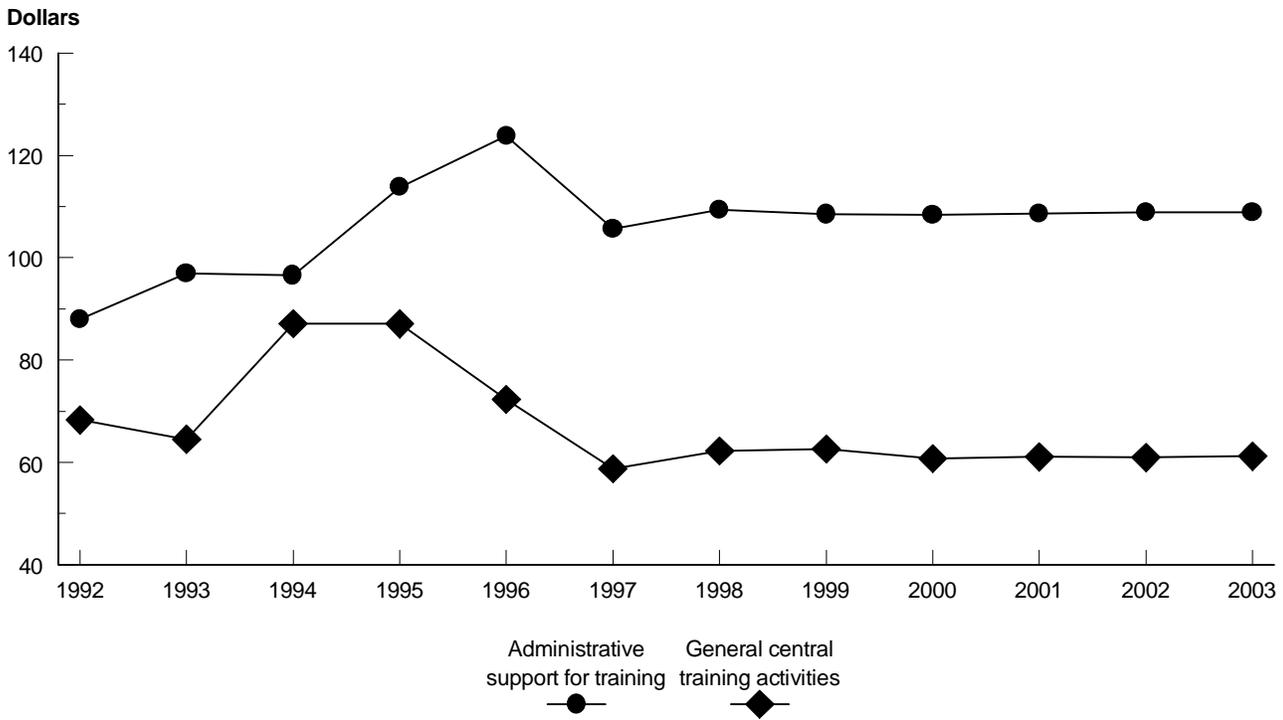
Source: Our analysis of DOD FYDP data.

Analysis of Marine Corps Central Training Categories

The Marine Corps projected that it would spend $1.8 billion on individual training programs in 1998. The Commanding General of the Marine Corps Combat Development Command manages the Marine Corps' schools. The following provides a detailed description of the Marine Corps' funding trends for the training categories.

Training of New Personnel

Funding for recruit training was projected to increase annually (except for 1994) between 1992 and 1999, from $388.6 million to $497.3 billion (see fig. VI.1). Workload was also projected to increase over this period from 7,270 to 9,168 work years. Recruit training workload and funding reflect the Marine Corps' plan to increase the percentage of first term enlistees in the Marines. The consequence of this increase in the percentage of enlistees is a higher turnover rate, which requires more accessions and recruit training to meet targeted end strength. Another major reason for the growth in the planned cost of recruit training is the increase in the course length of basic military training from 77 days to 88 days, implemented in fiscal year 1997.

Figure VI.1: Funding and Workload for the Marine Corps' Training of New Personnel Programs for 1992-2003 (constant 1998 dollars in millions)
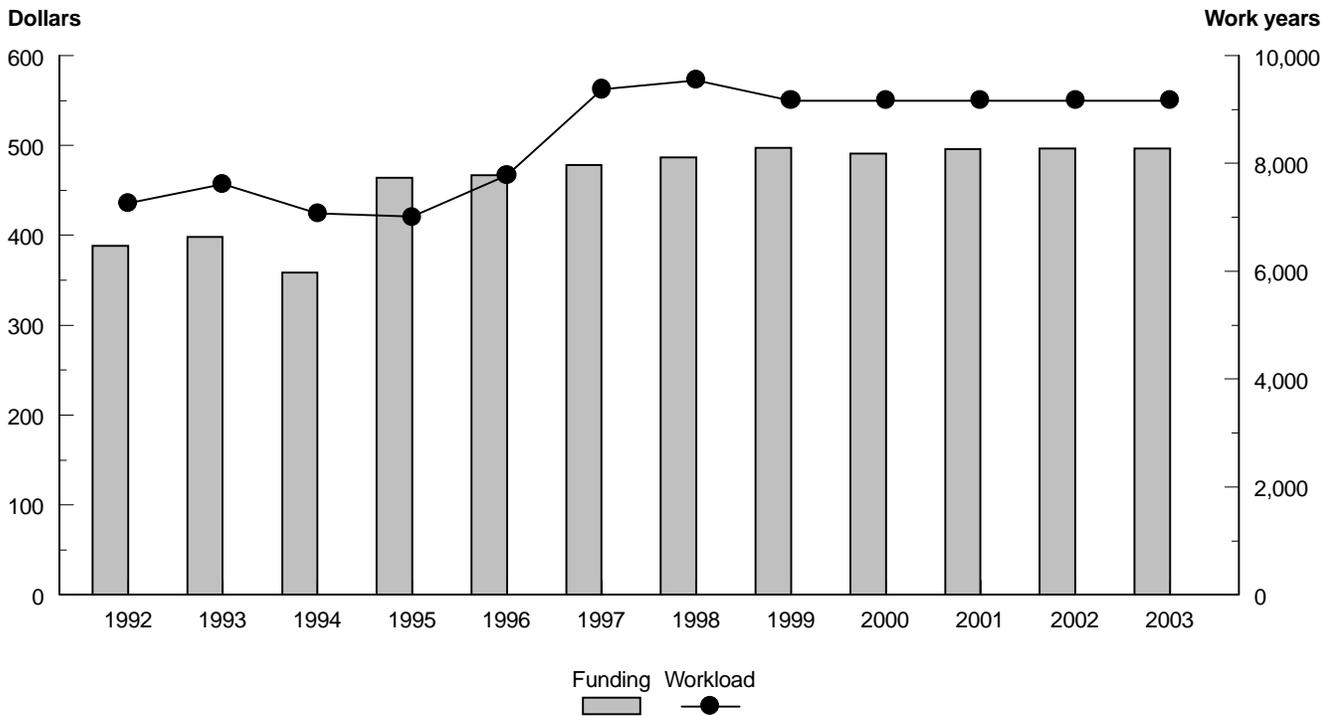
Dollars   **Work years**

Source: Our analysis of DOD FYDP data.

Professional and Skill Training

Funding for professional and skill training programs was projected to decline by 15 percent over the 1992-2003 period, from $837.7 million to $711.7 million, while workload was projected to grow from 7,878 to 10,348 work years, as shown in figure VI.2. This increase in workload was offset by a 16.1-percent fall off in the number of military personnel assigned to this training category.

Figure VI.2: Funding and Workload for the Marine Corps' Professional and Skill Training Programs for 1992-2003 (constant 1998 dollars in millions)
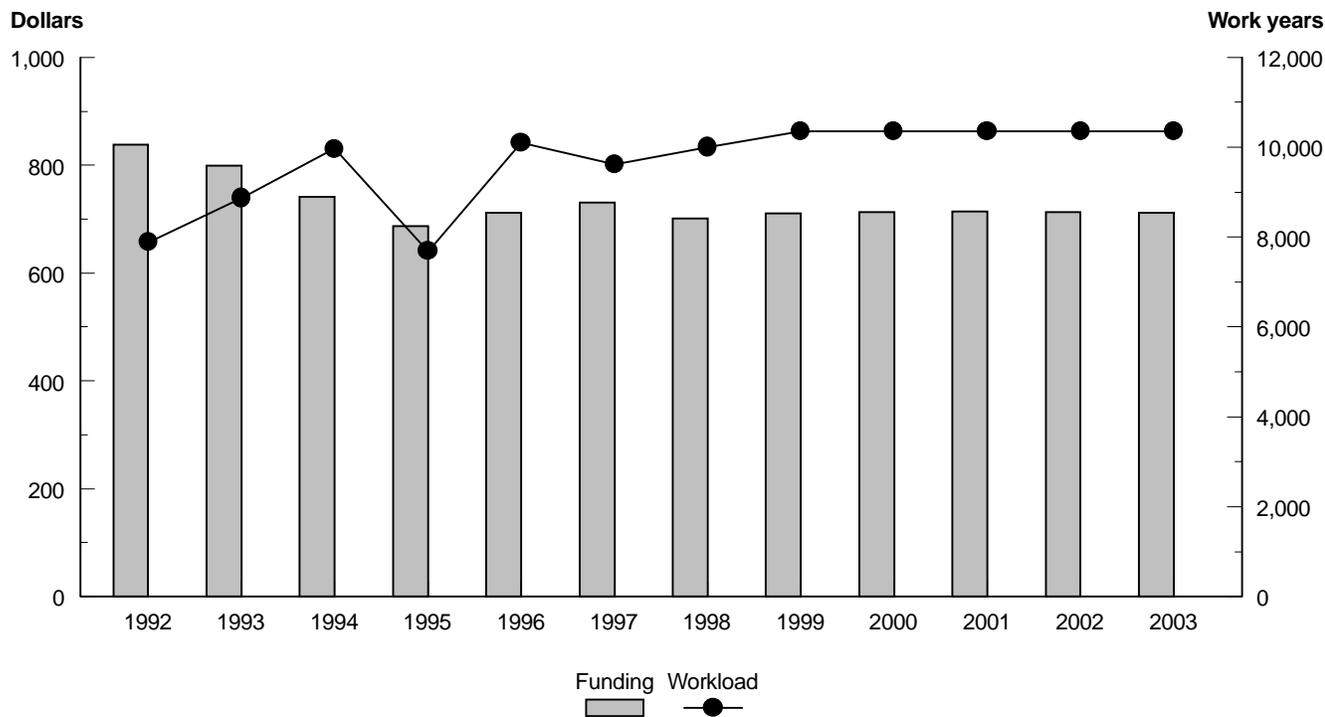
Source: Our analysis of DOD FYDP data.

Installation Support

Installation support funding was programmed to fall 6 percent between 1992 and 2003 (see fig. VI.3). Between 1992 and 1995, funding fell $29.3 million (11.6 percent); over three-quarters of this decline occurred between 1992 and 1993 due to sharp decreases in annual funding of both environmental compliance and base operations. According to the Marine Corps, some of the continued decline was due to a realignment of base support resources. For example, in 1994, the Marine Corps reduced its funding for the support of training bases to increase funding for basic and advanced skills initiatives at Marine Corps detachments. According to the Marine Corps, prior to 1996, there were also declines in the costs of base support contracts and in base support equipment purchases, utilities, and supplies in 1994 and 1995.

Figure VI.3: Funding for the Marine Corps' Installation Support for Training for 1992-2003 (constant 1998 dollars in millions)

Dollars
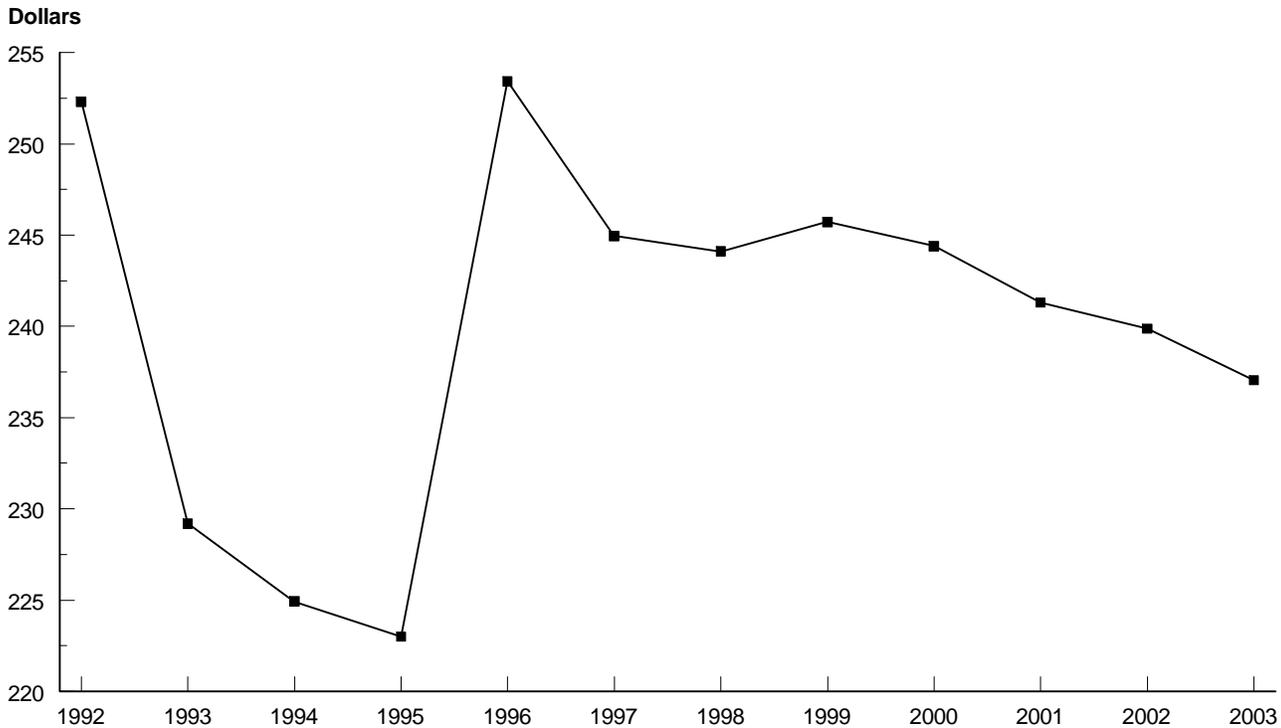
Source: Our analysis of DOD FYDP data.

In 1996, funding for base support grew 13.6 percent over the 1995 level to $253.4 million, slightly higher than the funding level for this category in 1992. According to the Marine Corps, this increase was due to several factors. First, the Marine Corps planned to procure new and replacement furniture and equipment in bachelor quarters, administrative offices, and mess halls. Second, funding was added for maintenance, repairs, and minor construction for the revitalization of bachelor enlisted quarters and the historical buildings at the Marine Corps Barracks in Washington, D.C. Third, environmental compliance funding increased significantly to meet more stringent federal, state, and local regulations for air pollution control and wastewater discharge limits as well as improvements to underground

storage tank equipment. Finally, during 1996 there was a one-time cost associated with the move of the Deputy Chief of Staff for Manpower and Reserve Affairs Department from Headquarters, Marine Corps, in Washington, D.C., to Marine Corps Combat Development Command, Quantico, Virginia.

Command Managed Training

Annual funding for the command managed training category grew 56.7 percent, from $118.1 million in 1992 to $185.2 million in 1997, due to increases in procurement of training systems but was planned to drop in both 1998 and 1999 (16.5 and 3.6 percent, respectively). After 1999, the funding was projected to increase slightly through fiscal year 2003 to $176.3 million. These trends are shown in figure VI.4.

Figure VI.4: Funding for the Marine Corps' Command Managed Training Programs for 1992-2003 (constant 1998 dollars in millions)

Dollars
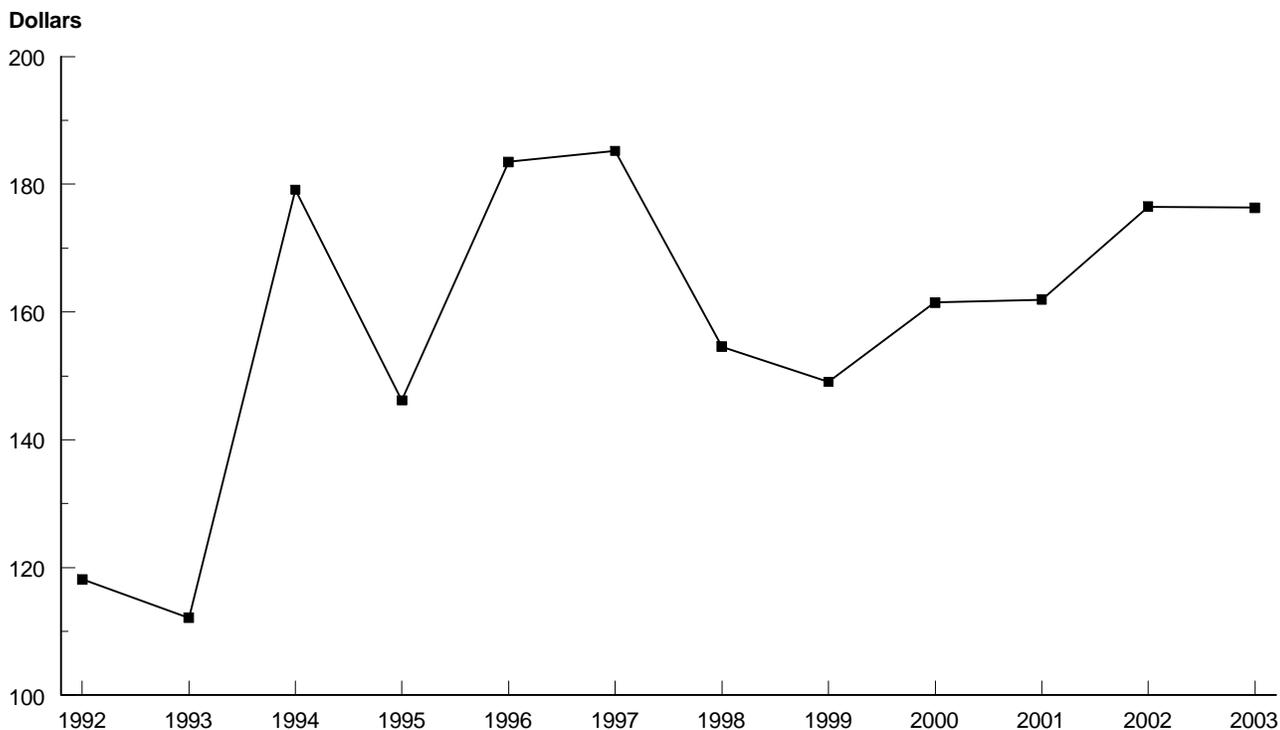
Source: Our analysis of DOD FYDP data.

Aviation and Flight Training

The aviation and flight training category was projected to receive less funding in 2003 than in 1992, as shown in figure VI.5. The Marine Corps' flight training is provided by the other services. The Marine Corps provides a minimum amount of funds for operation and maintenance to administratively support Marine officers assigned to duty in undergraduate flight training at other services' bases.

Figure VI.5: Funding for the Marine Corps' Aviation and Flight Training Programs for 1992-2003 (constant 1998 dollars in millions)

Dollars
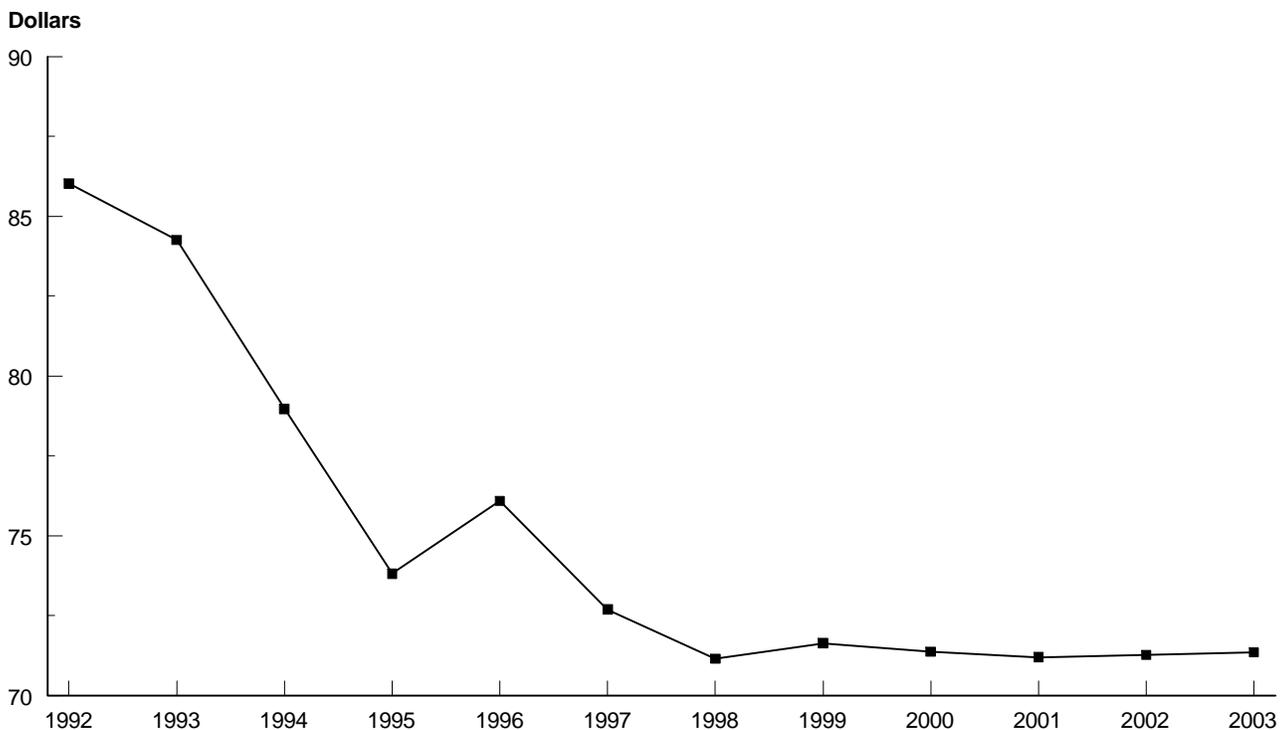
Source: Our analysis of DOD FYDP data.

Officer Training

Funding for this category was projected to fall by 28.6 percent between 1992 and 2003, primarily between 1992 and 1997, as shown in figure VI.6. Workload for the Marine Corps' commissioning program actually increased from 364 work years in fiscal year 1992 to 380 work years in fiscal year 1997. The Marine Corps projected that the workload would continue to increase through fiscal year 2003 to 426 work years.

Figure VI.6: Funding and Workload for the Marine Corps' Officer Training Programs for 1992-2003 (constant 1998 dollars in millions)
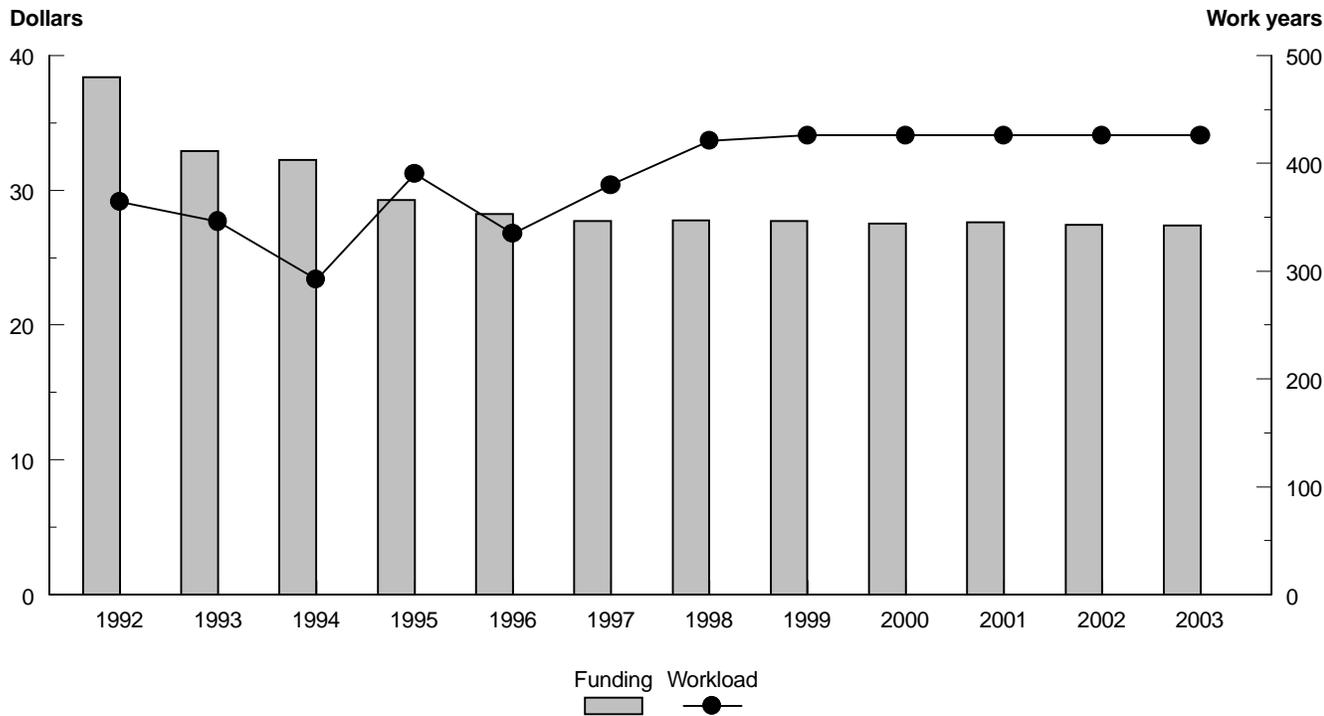
Source: Our analysis of DOD FYDP data.

General Central Training and Administrative Support

General central training activities and administrative support for training were collectively projected to receive an average of about 4.2 percent of annual Marine Corps central training funds and less than $75 million annually (see fig. VI.7). Administrative support for training was projected to receive less than one-quarter of 1 percent throughout the entire period reviewed.

Figure VI.7: Funding for Two Marine Corps Central Training Categories for 1992-2003 (constant 1998 dollars in millions)

Dollars

100 ┬

80 ┤

60 ┤

40 ┤

20 ┤

0 ┤
1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003

General central   Administrative
training activities   support for training
■   ●
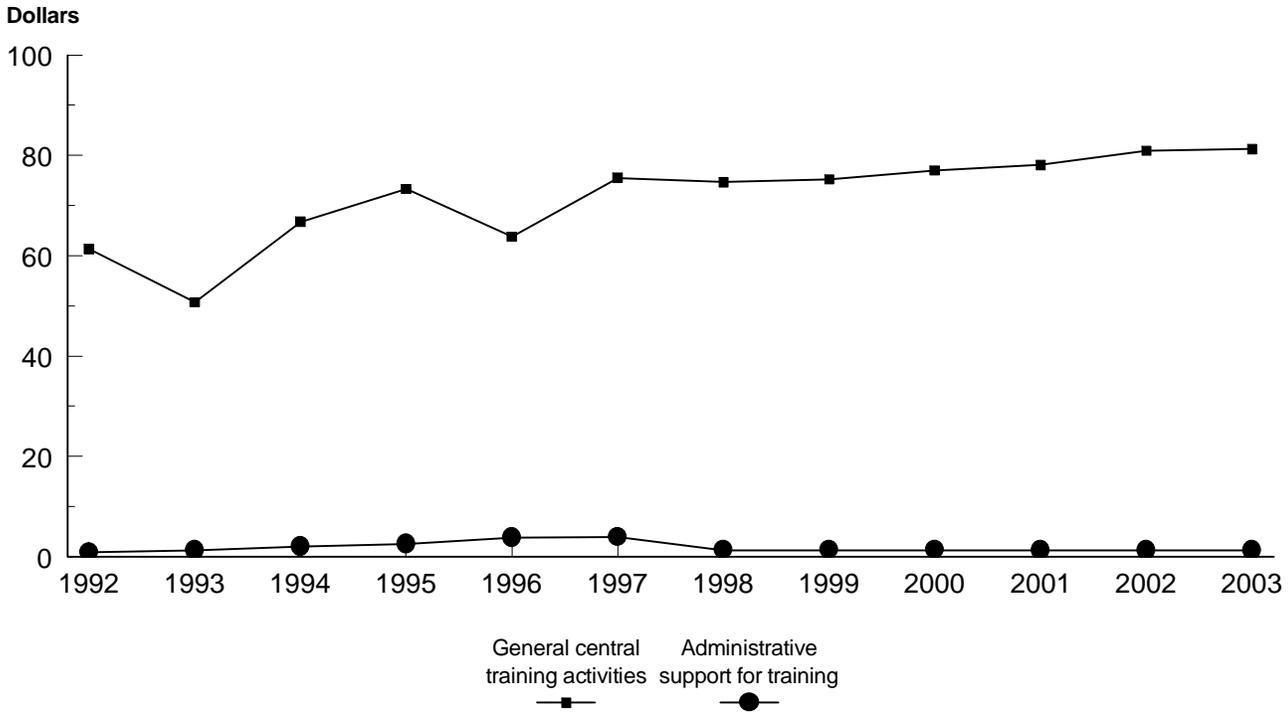
Source: Our analysis of DOD FYDP data.

Initiatives to Reduce Training Costs or Enhance Training Efficiency and/or Effectiveness

DOD and the services have used or plan to use several programs to make training more effective, less costly, or both. Three major efforts discussed below are designed to bring about intra- and inter-service course consolidations; distance learning to improve the efficiency of instruction; the acquisition of new equipment and technology to support training and reduce the total cost of training; and private sector cooperation to accelerate the applications of new learning technologies.

Interservice Training Review Organization

DOD established the Interservice Training Review Organization (ITRO) in 1972 to improve the cost-effectiveness and efficiency of service training consistent with individual service requirements. ITRO's role is to facilitate the consolidation/collocation of similar occupational and training courses managed by the services. Participation in ITRO is voluntary, and therefore, a service can reject recommended course consolidations. The implementing regulations make no provision for oversight by the Office of the Secretary of Defense (OSD) or the Joint Chiefs of Staff. Regulations, however, discourage major capital investments for consolidation and state that if major capital investment is required, savings should offset the investment within 10 years. Today, ITRO is focusing on ways to improve training efficiency/effectiveness through more extensive use of technology, and continuing efforts to consolidate courses.

Interservice training regulations govern the process to consolidate/collocate courses. Serviceable training materials and equipment are transferred to a host service without reimbursement to the donating services. The participating services should provide the proportionate share of instructor and school support personnel to the host service in order to support consolidated training. When a course is consolidated, the host service is responsible for making changes to the course so that it complies with the new curriculum that all of the participating services have approved. The participating services must also provide the host service with an estimate of their need for school graduates (estimated trained personnel requirements). The host service will, in turn, provide training positions and facilities for students from other participating services.

ITRO is working to overcome some obstacles to the consolidation of courses. The host service historically has not been reimbursed for the additional costs of training the other services' personnel. Recent draft ITRO regulations have established ground rules for resource transfers. Also, the services have not always provided their proportionate share of support.

Appendix VII
Initiatives to Reduce Training Costs or
Enhance Training Efficiency and/or
Effectiveness

For example, the Army, following a base closure, agreed informally with the Navy to relocate two courses to Fort Eustis, Virginia, where Army and Navy students would be trained. A study in 1997 established the Navy's fair share bill for these courses, and the Navy training command agreed to pay. Later, Navy headquarters told the Navy training command that it would not receive funding for the joint courses, and now the Navy wants to establish its own version of the same courses at a Navy facility using different resources.

One factor limiting course consolidations is the unavailability of facilities for interservice classes. While it may seem logical to consolidate similar courses at one location, it may be costly to build the facilities necessary for the increased training workload from consolidated courses. Also, different service standards impact consolidation decisions. For example, the services have different housing standards for their students. The cost to consolidate a course would be affected if the host service has to upgrade existing housing facilities to accomodate higher standards.

As part of the Roles and Missions effort, in November 1992, the Chairman, Joint Chiefs of Staff, asked the service chiefs, through ITRO, to conduct a thorough review of all technical and operations technical training across three functional areas: combat service support, combat support, and combat operations. This review, known as the Military Training Structure Review, was conducted over 3 years, January 1993 to December 1995, to eliminate unnecessary duplication of like training across the services. Of the two types of training, institutional and unit, only institutional or formal school training programs were reviewed to meet the prescribed 3-year time constraint. The Review's scope was limited to initial/entry-level training.

Four tenets were established to guide the review. First, eliminate duplication, create cost savings, and develop single-site training where feasible. Second, use a systems approach that considers factors such as cost, personnel, and infrastructure and their impact on the services. Third, establish an essential long-term perspective, unconstrained by a short-term initial startup cost, to posture for optimum out-year training capability. Finally, provide recommendations consistent with the readiness, responsibilities, and requirements of the services.

Appendix VII
Initiatives to Reduce Training Costs or
Enhance Training Efficiency and/or
Effectiveness

ITRO identified similar courses for possible consolidation/collocation. ITRO identified 49 occupational training areas,[1] consisting of 1,517 military training courses,[2] for possible consolidation/collocation. Of the courses considered, 128 were consolidated/collocated. ITRO reported that nearly 50,000 students would be trained in a consolidated/collocated environment—41 percent of that number from the Army, 24 percent Air Force, 20 percent Navy, and 15 percent from the Marine Corps. As a result of the Review, DOD reported it will realize an estimated annual recurring savings of $8.2 million for a one-time cost of $9.4 million, with a payback period of 1.1 years.

A specific example where ITRO directed consolidations involves dental technicians. The Army trained dental specialists, the Air Force trained dental assistant specialists, and the Navy trained dental technicians, before the Review. The ITRO Executive Board recommended that all of these courses, plus several similar ones, be consolidated at Sheppard Air Force Base, Texas. The Board determined that there would be a one-time cost of $633,000 for this consolidation but annual recurring savings of $218,000 would accrue.

Today, ITRO is monitoring the implementation of the Review's recommendations, evaluating training technology initiatives, and continuing efforts to consolidate courses.

Distance Learning

Distance learning is structured training that can take place almost anywhere and anytime without the physical presence of a student at a resident training institution. Distance learning can be facilitated by newer technology such as computers, video conferencing, the Internet, and satellite communications, or older means such as correspondence courses.

DOD is emphasizing distance learning concepts today for several reasons. First is the changing nature of the tasks assigned to the U.S. military. Missions other than war, such as peacekeeping, drug interdiction, and disaster relief, may require rapid ad hoc preparations for unusual contingencies. Distance learning can rapidly disseminate information developed for those missions. Second, it can increase force readiness by

[1]Examples of occupational training areas include aviation maintenance, basic medical specialist, calibration, transportation, and law enforcement/corrections.

[2]Examples of specific military courses include aviation munitions, aircraft systems, medical specialist, calibration, micro measurements, traffic management, military police training, and Navy security guard personnel training.

**Appendix VII
Initiatives to Reduce Training Costs or
Enhance Training Efficiency and/or
Effectiveness**

providing geographically dispersed personnel better access to training. Finally, DOD believes that downsizing means that it is less able to afford the time and resources needed to assemble students in a single location to provide training. Distance learning can increase the cost-effectiveness of training delivery systems by reducing the central training infrastructure and eliminating some of the travel costs associated with individual training.

To implement a distance learning program, we reported that a substantial investment will be required.[3] OSD officials estimated that DOD would need to invest as much as $2 billion for distance learning over the next 10 years. Even though estimated savings through the increased use of distance learning is an important factor in justifying the programs, the services have not developed a method to quantify the total savings. However, the Army estimates that it will achieve over $900 million in operation and maintenance savings and cost avoidances from 1998 to 2010.

OSD has facilitated the coordination of the services' distance learning plans and activities by sponsoring working groups to facilitate the increased use of distance learning and publishing specifications and guidance for military training products. For example, DOD issued an instruction that mandated standards for interactive courseware. Although OSD has actively promoted collaboration among the services, it has not developed a departmentwide strategy to focus service efforts. As a result, each of the services is pursuing its own distance learning strategy. Service officials noted that having a departmentwide strategy could prevent duplicative efforts, and inadequate sharing of resources and attention to the needs of both active and reserve forces.

Not all courses, however, can be taught by distance learning. The services must review thousands of courses to determine which can be taught via distance learning technologies. After reviewing 2,000 courses, the Army plans to convert about 525 traditional courses to distance learning and has estimated that it would cost about $20 million in 1998 to convert 31 of these courses. The Air Force has about 4,000 courses that it must review for conversion. In fiscal year 1999, the Air Force plans to fund one-time start up funding for distance learning equipment and software. The Navy is reviewing about 4,000 courses and the Marine Corps plans to review about 250 courses for conversion to distance learning.

---

[3]Distance Learning: Opportunities Exist for DOD to Capitalize on Services' Efforts (GAO/NSIAD-98-63R, Dec. 18, 1997).

Appendix VII
Initiatives to Reduce Training Costs or
Enhance Training Efficiency and/or
Effectiveness

In addition to determining the number of courses that can be taught through distance learning, training developers must determine the best and most cost-effective media for delivering distance learning. From 1989 to 1994, the Army conducted pilot studies to determine the effectiveness of training with five distance learning technologies: video teletraining, computer conferencing, computer-based instruction, voice-based computer-based instruction, and desktop video production. The Army concluded that the instructional delivery medium would not significantly affect training effectiveness compared with traditional face-to-face training and that distance learning could significantly decrease the time a soldier is absent from his home station, thereby reducing travel and per diem costs.

Along with developing the distance learning courses, the services must establish facilities and acquire the necessary communications equipment to transmit their distance learning courses. The Army, for example, is planning to establish 745 distance learning classrooms that will be linked through a commercial telecommunications network. The Army currently has 100 television network sites that have delivered 30,000 hours of training to at least 100,000 Army, Air Force, Navy, Marine Corps, and civilian students in fiscal year 1996.

Today, all of the services have begun to incorporate distance learning technology into their training programs. The Army is the only service that has a formally documented distance learning plan, which has been endorsed by the Deputy Secretary of Defense as a model for developing and implementing the concept. The plan establishes critical milestones and funding requirements for both active and reserve forces.

The Air Force has used a satellite broadcast network for distance learning since 1992. The Air Force has increased the amount of network broadcast hours from less than 500 in 1992 to 2,000 in 1996, and it projects that it will use 4,500 broadcast hours by 1999. Today, the network reaches every U.S. base.

The Air Force Reserve leases its satellite network equipment from the Army and uses the Army's television network system. The Air Force Reserve has 46 Army video teletraining sites that are capable of both two-way video and audio and has five Air Force network sites that receive programs from the active Air Force satellite broadcast network. The Air Force Reserve system broadcasted 2,800 hours in fiscal year 1996. The Air National Guard uses the same satellite broadcast system as the active Air

Appendix VII
Initiatives to Reduce Training Costs or
Enhance Training Efficiency and/or
Effectiveness

Force and maintains 202 of its own sites that can receive broadcasted courses.

The Navy has a video teletraining network that is used for both distance learning and teleconferencing. The system uses satellites to broadcast to ships at sea and telecommunication lines to deliver courses on shore. The system, which consists of 19 sites and 25 classrooms, is available 24 hours every day and is used an average of 10 hours per day, 5 days a week. In 1997, the Navy offered 52 courses through its network. Also, in 1997, the Marine Corps established the Marine Corps Institute On-Line learning capability, which will make courseware accessible to all Marines via interactive courseware across the Internet.

Advanced Distributed Learning

On November 4, 1997, the White House Office of Science and Technology Policy and DOD launched the Advanced Distributed Learning (ADL) initiative. The purpose of the ADL initiative is to ensure access to high quality education and training materials that can be tailored to individual needs and can be made available whenever and wherever they are required. The initiative is intended to accelerate application of new learning technologies to reduce the total cost of training, enhance performance, and maintain readiness. ADL supports the development of distance learning, as well as programs that enhance job performance.

The origins of ADL, however, can be traced to the Quadrennial Defense Review in which DOD reviewed America's defense needs from 1997 to 2015. The Review looked for high-payoff opportunities for modernizing training while enhancing future readiness. It called for distributed and just-in-time training wherever possible, as well as Internet-based development, delivery, and feedback for training. The ADL initiative is part of the strategy to accomplish these goals.

The ADL initiative is designed to accelerate large-scale development of dynamic and cost-effective learning software and to stimulate an efficient market for these products in order to meet the education and training needs of the military and the nation's workforce in the 21st Century. It hopes to do this through the development of a common technical framework for computer and network-based learning that will foster the creation of reusable learning content as instructional modules. DOD envisions ADL as a collaborative effort among DOD, other government agencies, education communities, and the private sector. It also thinks that many university and business training organizations are interested in the

Appendix VII
Initiatives to Reduce Training Costs or
Enhance Training Efficiency and/or
Effectiveness

same kind of system. Several public and private organizations have expressed an interest in the ADL initiative, including Boeing, General Motors, IBM, Microsoft, Netscape, Oracle, Sun, and universities in North Carolina, Florida, California, and Massachusetts.

On January 30, 1998, the President issued a memorandum to the heads of all executive branch departments and agencies that addressed enhancing learning and education through technology. The President tasked agencies to develop a model technical approach to facilitate electronic instruction and offered the ADL initiative as an example to follow.

ADL's strategy is to (1) promote widespread collaboration, (2) exploit Internet technologies, (3) develop the next generation of learning technologies, (4) create reusable modular courseware, and (5) lower total costs of training and education.

According to OSD training officials, the heart of the ADL initiative will be the development of reusable modular courseware that will be available to all through the Internet. Since a portion of DOD training is core material that does not change over time, DOD will be able to reuse these core modules, as well as many applications and utilities. Only certain modules would need to be updated regularly, which would be less costly than completely revising an entire course.

Some of the courseware will be applicable to private training needs as well as DOD's needs. For example, the services train personnel in wheeled vehicle maintenance, as does General Motors. Therefore, courseware and job performance aids might be developed jointly to meet the needs of both parties and be network-based for delivery, feedback, and management. Some of the courseware may already be developed, and through collaboration with industry, DOD may be able to capitalize on what is available in private industry.

The ADL participants have established a three-phased approach for designing the ADL concept that will run through June 1999. During Phase I, participants will develop and refine functional and technical requirements and identify opportunities for collaboration. Phase II is expected to consist of issuing initial guidelines for a common ADL framework and building and testing pilot models. During Phase III, the participants will finalize an ADL framework and build and test additional modules. At the time of our review, DOD had not estimated the costs nor the savings from implementing the ADL initiative.

Comments From the Department of Defense

UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

PERSONNEL AND
READINESS

MAY 2 9 1998

Mr. Richard Davis
Director, National Security Analysis Issues
National Security and International Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Davis:

This is the Department of Defense (DoD) response to the General
Accounting Office (GAO) draft report "DEFENSE INFRASTRUCTURE: Central
Training Funding Projected to Remain Stable During 1997-2003" (GAO Code
701118, OSD Case 1603). The Department generally concurs with the draft report
as presented.

While generally concurring with the report, the Department makes the
following observations:
- aggregate DoD-wide funding trends for any category of Central Training
cannot be generalized to an individual Service;
- apparent funding changes within a category of Central Training may
actually be due to accounting realignments;
- projected savings from distance learning programs are planned to be
invested into other high-payoff advanced learning technologies; and
- increasing accessions, to the levels required to sustain authorized end
strengths, increases the need for training. The fact that accessions drive
approximately 70 percent of the Services' institutional training requirements is a
key reason why Central Training funding is not projected to decline during fiscal
years 1997-2003.

The Department appreciates the evaluation team's inclusion of our
previously provided informal comments and this opportunity to provide further
comments on the draft report.

Sincerely,

Rudy de Leon

Major Contributors to This Report

National Security and International Affairs Division, Washington, D.C.

Robert Pelletier
Edna Thea Falk
Dale Wineholt

Norfolk Field Office

Gaines R. Hensley
Patricia Lentini